

Guidance for Siting, Design, and Operation of Nonhazardous Solid Waste Impoundments in Idaho



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Abbreviations, Acronyms, and Symbols

§	section (a section of federal or state rules or statutes)
BMPs	best management practices
CCR	coal combustion residual
CFR	Code of Federal Regulations
DEQ	Idaho Department of Environmental Quality
EPA	United States Environmental Protection Agency
IDAPA	Idaho Administrative Procedures Act
ISWFA	Idaho Solid Waste Facilities Act
MOU	memorandum of understanding
MSWLF	municipal solid waste landfill
NPDES	National Pollutant Discharge Elimination System
NSWI	Nonhazardous Solid Waste Impoundment Facility
PER	preliminary engineering report
PFAS	per- and polyfluoroalkyl substances
POTW	publicly owned (domestic wastewater) treatment works
QA	quality assurance
QC	quality control
RCRA	Resource Conservation and Recovery Act
TENORM	technologically enhanced naturally occurring radioactive material
TSD	treatment, storage, and disposal
USCA	United States Code Annotated
VSQG	Very Small Quantity Generator

1 Introduction

This guidance is provided to assist with the siting, design, and operation of nonhazardous solid waste impoundment (NSWI) facilities accepting pumpable waste. This guidance does not have the force and effect of law or rule but is designed to serve as a primary reference tool on how to comply with applicable laws and rules.

Pumpable waste is defined in the “Solid Waste Management Rules” (IDAPA 58.01.06.005.32) (Solid Waste Rules) as “[w]astes, including non-domestic septage, sludge, wastewater and non-municipal solid wastes, which are pumped from a holding area or container into a watertight tank truck or equivalent and transported for processing or disposal.” All pumpable waste is industrial wastewater, as defined in the “Wastewater Rules” (IDAPA 58.01.16.010.30), but only industrial wastewater that is pumped or mechanically removed for transport off site is pumpable waste. While the definition of pumpable waste does not include domestic septage, this guidance includes the topic because facilities that intend to accept pumpable waste may also seek approval to accept domestic septage (section 5.2.10).

Pumpable wastes that do not pass the *paint filter test* as described in the United States Environmental Protection Agency’s (EPA’s) [Method 9095B](#) cannot be introduced to traditional municipal or nonmunicipal landfills because the liquid component of the waste may add to leachate volume, increasing the risk of ground water contamination. Liquids can also increase methane gas production. Pumpable wastes have traditionally been taken to publicly owned treatment works (POTWs) for disposal. Pumpable wastes that meet a POTW’s acceptance criteria can still legally be disposed of in this manner. Generators and transporters of pumpable wastes should contact their local POTWs to determine if this option is available.

For this guidance, *impoundment* refers to any lined or unlined area of a facility where pumpable waste or sludge that does not pass the paint filter test is managed outside of a closed container, including any area where solidification occurs. Wastes that pass the paint filter test, such a bulked or solidified waste, are managed in a *waste management area*.

The simplicity and low operating costs of surface impoundments make them an attractive technology for the handling, storing, processing, treating through evaporation, equalizing, neutralizing, solidifying, and disposing of pumpable wastes. Unless a facility is designed for total evaporation, liquid reduction methods will be employed for continuous operations and acceptance of additional pumpable waste. A properly located, constructed, maintained, and operated surface impoundment can be an effective and environmentally sound waste management and disposal strategy for pumpable waste.

The impoundment of pumpable waste considered to be solid waste by regulation, and not otherwise regulated under a discharge or land application permit, is regulated under IDAPA 58.01.06. In this guidance, the Idaho Department of Environmental Quality (DEQ) refers to an impoundment facility regulated under the Solid Waste Rules as a *Nonhazardous Solid Waste Impoundment*, or *NSWI*. A NSWI is an impoundment facility receiving pumpable waste where (1) the waste does not pass the paint filter test prior to placement in an impoundment, and (2) operations are not otherwise regulated under a discharge or land application permit. NSWIs may

be stand-alone, or co-located at an approved landfill or other permitted solid waste facility. Facilities engaged in food processing or other manufacturing or industrial activities that manage their liquid waste streams on site, are not managing pumpable wastes as that term is defined, and are generally not regulated as NSWIs. Furthermore, these facilities are often regulated under a discharge permit or wastewater reuse permit (i.e., land application permit) and are excluded from regulation by DEQ's Solid Waste Program.

The scope of this guidance does not include the construction or operation of facilities accepting municipal wastewater and industrial wastewater under a pretreatment program, as defined in IDAPA 58.01.16, or facilities accepting hazardous waste other than Very Small Quantity Generator (VSQG) waste, formerly known as Conditionally Exempt Small Quantity Generator waste.

1.1 Roles and Responsibilities

Facility owners/operators, local governments, local public health districts, and DEQ each have roles and responsibilities related to NSWIs as described below. DEQ and local public health district jurisdictional maps are found in Appendix A.

1.1.1 NSWI Owner/Operator Roles and Responsibilities

Under IDAPA 58.01.06, NSWI owners/operators are generally required to provide safe pumpable waste treatment, processing, and disposal at a facility sited, designed, operated, closed, and maintained after closure according to the Solid Waste Rules and the facility's site approval application, design approval application, approved facility Operating Plan, and approved facility Closure/Post-closure Plan. The owner/operator is responsible for submitting the required documents to DEQ, the local public health district, or both, regarding the facility's site approval, design approval, Operating Plan, and Closure/Post-closure Plan. If an expansion or change in site operations occurs, the owner/operator may be required to submit revised documents for approval. For example, if a facility decides to accept waste not already covered in a site approval, the owner/operator is required by the Solid Waste Rules to provide revised documents for approval prior to accepting such waste.

1.1.2 Local Government Roles and Responsibilities

According to Idaho Code §31-4403, the county commissioners of each county must acquire sites or facilities and maintain and operate solid waste disposal systems. The counties may meet this obligation by owning or operating disposal systems themselves or by ensuring services are available through contracts or franchise agreements. Some counties elect to own or operate NSWIs alongside a municipal solid waste landfill (MSWLF) so bulk liquids and traditional solid waste can be managed at the same approved site.

Counties and municipalities are also responsible for NSWI siting decisions arising out of their zoning and land use authorities. These authorities can extend into facility operations.

1.1.3 Local Public Health District Roles and Responsibilities

In a *memorandum of understanding* (2013 MOU) between DEQ and the seven local public health districts, DEQ delegated the authority to review and approve Operating Plans to the districts for Tier II and Tier III facilities. The 2013 MOU also provides the districts with authority over the review and approval of facility Closure/Post-closure Plans, annual inspections, and co-authority over enforcement activities at all nonmunicipal solid waste facilities.

This guidance reflects the current language in the 2013 MOU, but the MOU does not specifically address roles and responsibilities assigned to the local public health districts and DEQ for NSWI facilities. NSWI owners/operators should note that DEQ has a prominent role in NSWI oversight compared to other types of solid waste facilities because DEQ staff has direct knowledge and expertise relating to pumpable waste management and disposal. A revised distribution of oversight responsibilities related to NSWI facilities will be developed and available on DEQ's solid waste web page. In the interim, when this guidance references a review or approval performed by the local public health districts, DEQ may be performing that NSWI facility review or approval.

Together, the local public health districts and DEQ perform regulatory oversight of solid waste facilities, including reviewing and commenting on submittals provided by facilities. For example, the districts provide courtesy reviews and submit comments to DEQ on site approval applications and design approval applications; DEQ incorporates or otherwise accounts for district comments in their response to the facility. Likewise, DEQ provides courtesy reviews and submits comments to the districts on Operating Plans and Closure/Post-closure Plans; the districts incorporate or otherwise account for DEQ comments in their response to the facility. For Operating Plans, the local public health districts and DEQ will ensure the information provided in the Operating Plans, including but not limited to the types of waste accepted, are consistent with the approved site application and approved facility design.

1.1.4 DEQ Roles and Responsibilities

Per the 2013 MOU, DEQ reviews and approves the siting and design aspects of nonmunicipal solid waste facilities in Idaho, and the districts oversee their operations and closure/post-closure care. As the primary authority over solid waste facilities in Idaho, including NSWIs, DEQ plays a central role in NSWI oversight compared to other types of solid waste facilities. This oversight will include a more active role in reviewing and approving Operating Plans, Closure/Post-closure Plans, plan modifications, and facility inspections.

2 Idaho's Tiered Solid Waste Facility Classification

By definition, solid waste incorporates a wide range of waste streams with varying characteristics. To address the many different characteristics, the Solid Waste Rules regulate solid waste facilities based on a tiered classification system. Each of the three facility tier classifications considers the volume and potential for harm to human health and the environment from the waste being managed. Facility owners/operators managing larger volumes of waste or waste types with a greater potential for harm to human health and the environment must

demonstrate a higher level of protection when proposing site, design, operating, and closure features for a facility.

While IDAPA 58.01.06 provides a tier classification of *below regulatory concern*, this tier classification does not apply to facilities receiving pumpable waste. Tier I facilities may accept pumpable waste, but the cumulative volume of all waste at the site at any one time must be less than or equal to 200 cubic yards, or approximately 40,395 gallons. If an impoundment facility proposes to meet the Tier I requirements, contact DEQ before construction to discuss whether the Tier I designation is appropriate.

Tier II facilities cannot accept VSQG hazardous waste, or materials with a high human pathogenic potential. The facility also cannot manage solid waste in a manner or volume that will form toxic leachate or gas, or manage solid waste in a manner or volume that may pose a substantial risk to human health or the environment. Tier II facilities are required to obtain site and design approval from DEQ and Operating and Closure/Post-closure Plan approvals from the local public health district. Requirements for Tier II facilities are contained in IDAPA 58.01.06.012.

Appropriately sited, designed, and operated Tier III facilities can accept VSQG hazardous waste and materials with a high human pathogenic potential. The facility can also manage waste that will form toxic leachate or gas, and waste likely to pose a substantial risk to human health or the environment. IDAPA 58.01.06.009.04 authorizes DEQ to make the determination. The management of pumpable waste is generally considered by DEQ to pose a substantial risk to human health and the environment and, therefore, NSWIs are initially categorized as Tier III facilities.

Unless a facility obtains a variance from specific requirements, Tier III facilities must be designed and constructed with a liner, leachate collection system, air emission controls, and a ground water monitoring system. Requirements for Tier III facilities are contained in IDAPA 58.01.06.013. The leachate collection system requirement is not directly applicable to NSWI facilities because the waste itself that is being managed is liquid. The air emission control system requirement has limited applicability, similar to composting sites, but may apply depending on waste types managed, design features, and operational factors.

2.1 Site-Specific Classification

A NSWI facility owner/operator may request to be regulated pursuant to the requirements of a lower classification and can submit information demonstrating a *site-specific classification* is appropriate. IDAPA 58.01.06.009.06 provides the procedure and information required to establish a site-specific classification. Generally, the liquid nature of the waste must be fully accounted for in the siting, design, and operation of the facility. To successfully establish that a lower tier designation is appropriate, an owner/operator should adequately address the following factors in the site approval application, design approval application, and the Operating Plan:

- Transport of potential contaminants through soils
- Prevention of soil and ground water contamination
- Detection of soil and ground water contamination

- Inherent difficulties in recognizing hazardous constituents in pumpable waste without costly analytical testing
- Concentration of contaminants within impoundments due to evaporation and settling

Applicants must present sufficient information to establish a site-specific classification, including design and operational information, during the siting application process and before DEQ makes a siting decision. The waste types and volumes that will be managed at the facility play a key role in evaluating a request for a site-specific classification. Certain pumpable waste types and volumes may not be appropriate for a site-specific Tier II classification.

2.2 NSWIs, Multiple Impoundments, and MSWLFs

Some NSWIs are co-located with other impoundments, other Tier I, II, or III solid waste operations, or MSWLFs. DEQ regulates Tier I, II, and III facilities under the Solid Waste Rules and MSWLFs under the Idaho Solid Waste Facilities Act (ISWFA). Both the ISWFA and the Solid Waste Rules require DEQ to review the appropriateness of the proposed site and issue a site approval (i.e., site certification). The appropriate Tier classification for a site is based on all solid waste operations occurring within the site-certified area. For example, a NSWI with a 500,000-gallon impoundment of pumpable waste with minimal environmental or human health concern may be approved as a Tier II facility. However, a facility with fifteen 10,000,000-gallon impoundments handling the same type of waste may be considered a Tier III facility if, due to the total volume of waste managed at the site, DEQ determines the facility poses a substantial risk to human health or the environment.

When a site approval application for a new solid waste facility is prepared for submission to DEQ, the applicant should thoroughly account for and provide information pertaining to all future, planned solid waste operations and waste types. By doing so, the site will be reviewed and approved at the appropriate, future tier classification, ensuring all future operations intended by the facility can be accommodated.

When an existing facility seeks to expand, DEQ will review the site certification to identify the operations and waste types for which the site was certified. If the site certification does not account for the expansion operations or waste types, DEQ may request additional information or modeling from the applicant to supplement the site certification information on file and to ensure the site can accommodate the expansion. While adding more protective design and operational measures will qualify most sites for reasonable facility expansions, in some cases, expansion plans may have to be curtailed to account for site limitations.

If a MSWLF site was originally approved to accommodate leachate management systems, and the landfill has physical space to add a NSWI operation within the site-certified area, DEQ will not require a new site certification. However, DEQ will require approval of all necessary design elements to adequately protect soils and ground water. In cases where a municipal landfill was approved without considering leachate or other liquid waste management, DEQ may request a comprehensive review of the site characteristics before approving the NSWI addition in the site-certified area. Adding a NSWI outside a site-certified area is considered either a lateral expansion or a separate NSWI facility requiring a new site certification.

2.3 Pumpable Waste and its Relationship to Industrial Wastewater

Idaho law does not distinguish pumpable waste from industrial wastewater. Rather than require facilities receiving pumpable waste to obtain design and construction approvals from multiple programs, DEQ has determined that these facilities only need to follow one application process under the Solid Waste Program. To achieve this, the Solid Waste Program's application requirements for NSWI facilities are designed to meet the submission and review standards for both solid waste and wastewater. A similar example is when a leachate pond is approved at a municipal solid waste landfill: the leachate pond is approved as part of the landfill design application process, but the pond approval process and technical design meets the industrial wastewater lagoon requirements in IDAPA 58.01.16.401.

Facilities receiving pumpable waste must submit a NSWI Site Approval Application and Design Approval Application according to the Solid Waste Rules. These submissions are similar to and will also meet the Plans and Specifications submission requirement in IDAPA 58.01.16.401. Wastewater professionals accustomed to submitting preliminary engineering reports (PERs) and plans and specifications will be accommodated during the NSWI application process.

3 NSWI Facility Siting

Siting a NSWI can be a difficult task for owners/operators. In addition to State of Idaho requirements, local governments have planning and zoning requirements that may require a conditional use permit for solid waste management sites. Early discussions with all regulatory agencies can reduce the time required to gain approval. Conducting a site tour with local and state agencies may identify potential issues early in the approval process.

Neighbors may oppose a proposed NSWI for fear that the facility will reduce their property values or reduce the enjoyment of their property due to odors, dust, vehicle traffic, and vectors such as flies, birds, and rodents. Surrounding property owners may also be concerned that the NSWI will impact ground water used for drinking water. Neighbor opposition can be addressed early in the process by holding meetings to discuss the proposed facility.

The Tier III siting requirements contained in IDAPA 58.01.06, or their site-specific equivalent as determined by DEQ, are considered the minimum criteria to protect human health and the environment for NSWIs. Facility owners/operators must consider these criteria when evaluating potential sites and developing the facility's design and Operating Plan. It is important to understand the site, design, operations, and closure are all integral to the protecting human health and the environment. Federal criteria for classification of solid waste disposal facilities and practices are provided in 40 CFR 257.3. Solid waste facilities or practices violating criteria established in 40 CFR 257 are considered open dumps and may be subject to citizen lawsuits as provided for under federal law in the Solid Waste Disposal Act of 1965, 42 USCA §§6901 to 6992K.

When a NSWI facility is co-located with a MSWLF, certain siting requirements applicable to the landfill may differ from the siting requirements in the Solid Waste Rules. For example, the property line setback requirement applicable to MSWLFs is 200 feet while the setback requirement for Tier III facilities under the Solid Waste Rules is 100 feet. In instances where

both sets of requirements can be met, DEQ will request facilities meet both requirements. If there is a more stringent and a less stringent requirement, DEQ will expect facilities to meet the more stringent requirement. Where a facility cannot identify the more stringent requirement, consult DEQ to determine the appropriate course of action.

The following sections summarize the siting criteria contained in IDAPA 58.01.06 that apply to Tier III NSWIs. Additional information requested in the NSWI Site Approval Application will facilitate the application review process and assist DEQ in providing early input on whether the applicant's proposal will meet the necessary requirements. The NSWI Site Approval Application resembles a combined solid waste facility siting application and a wastewater PER. Wastewater professionals who are familiar with preparing and submitting PERs can be accommodated during the application process.

The following information about the planned facility and operations will be required to properly review a siting application:

- Identify impoundment liner type, along with storage capacity for initial and planned impoundments.
- Provide calculations establishing facility's operational design capacity that identifies a volume acceptance rate for each segregated waste stream. These are necessary to ensure the facility is designed accordingly, the facility understands its waste volume limitations, and all waste accepted at the facility is accounted for.
- Utilize wastewater concepts and terminology, including average day flow, maximum day flow, maximum month flow, peak instantaneous flow, or peak hour flow. Refer to the Wastewater Rules for definitions not available in the Solid Waste Rules.
- Identify all planned methods of liquids reduction and each method's reduction capacity, including all calculations or modelling that support the reduction. These methods may include surface evaporation, solidification, accelerated evaporation systems, or other proven methods.

As with all solid waste facility applications, DEQ offers applicants a pre-application conference to discuss approval procedures, application contents, timetables for application processing, and siting requirements. DEQ highly recommends applicants become familiar with the Solid Waste Rules and engage with the agency at least 6 to 12 months before submitting a NSWI Site Approval Application. Facilities completing a Site Approval Application should read the siting criteria contained in the Solid Waste Rules before completing the application. In addition to completing an application, all siting criteria will need supporting documentation to demonstrate compliance. If a facility intends to apply for a site-specific classification, design and operational information must be submitted to DEQ before the siting determination can be made. The Solid Waste Rules require solid waste facility siting applications to be submitted by a *qualified professional*. DEQ expects NSWI Site Approval Applications to be submitted and stamped by a professional engineer or professional geologist registered in the State of Idaho. Requirements for Tier III solid waste facilities are contained in IDAPA 58.01.06.13. The Site Approval Application is available on DEQ's [Solid Waste in Idaho](#) web page.

3.1 Floodplain Restriction

Owners/operators may not locate solid waste facilities within a 100-year floodplain if the facility will restrict the flow of the 100-year flood, reduce the temporary water storage capacity of the floodplain, or result in a washout of solid waste that would pose a hazard to human health and the environment. Owners/operators proposing to locate a NSWI in a 100-year floodplain must ensure the site application specifically addresses how the facility will not restrict the 100-year flood, reduce temporary water storage capacity of the floodplain, or result in a washout of solid waste. All site approval applications must contain a [Federal Emergency Management Agency \(FEMA\) map](#) with the facility identified or a site evaluation report and a letter of conformation stamped by a registered professional engineer or registered professional geologist registered in the State of Idaho. Floodplain restrictions applicable to Tier III solid waste facilities are contained in IDAPA 58.01.06.013.01.a.

3.2 Endangered or Threatened Species Restriction

To address potential impacts to endangered and threatened species, owners/operators proposing to locate or laterally expand a NSWI must obtain a determination from the United States Fish and Wildlife Service, State of Idaho Office of Species Conservation, or Idaho Department of Fish and Game. If a determination is made that the proposed site may impact endangered or threatened species, the owner/operator may be required to conduct a survey of the proposed site to determine if endangered or threatened species are on site or if the site contains critical habitat for the species. If the site contains endangered or threatened species or critical habitat, the owner/operator may need to address impacts to those species (see the References and Resources section for web links). Endangered and threatened species restrictions applicable to Tier III solid waste facilities are contained in IDAPA 58.01.06.013.01.b.

3.3 Surface Water Restrictions and Stormwater

Solid waste impoundment facilities can impact streams, rivers, lakes, and reservoirs if siting, design, operations, and closure are not adequately considered. Pumpable waste may be released from impoundments during storm events and system failures. Adequate stormwater controls and site grading can minimize overtopping and system failures and prevent pumpable waste from washing into surface waters.

To address impacts to surface waters, site applications of proposed facilities or lateral expansions must include a scaled map that indicates surface waters in the vicinity. Design plans must include stormwater control features and demonstrate those features are adequate to control a 24-hour, 25-year storm event at a minimum. While the 24-hour, 25-year storm event is the minimum design requirement, each facility's stormwater control system may be designed on site-specific meteorological conditions. The Operating Plan must discuss how the stormwater control features will be maintained to function as designed. This may include semiannual inspections of the stormwater control system and maintenance activities by facility staff. Records of stormwater inspections should be maintained as part of the facility operating record. Owners/operators may also contact EPA to determine if a National Pollutant Discharge Elimination System (NPDES) permit is required. On July 1, 2021, DEQ will begin issuing stormwater permits under EPA

delegation (see the References and Resources section for web links). Requirements for surface water restrictions in Tier III solid waste facilities are contained in IDAPA 58.01.06.013.01.c.

3.4 Park, Scenic, or Natural Use Restriction

To reduce potential impacts to visitors of national or state parks and scenic or natural use areas, the Solid Waste Rules require a 1,000-foot separation distance between the active portion of the facility and the boundary of any state or national park or land reserved or withdrawn for scenic or natural use, including but not limited to, wild and scenic areas, national monuments, wilderness areas, historic sites, recreation areas, preserves, and scenic trails. Site approval applications for proposed facilities and lateral expansions must contain a scaled map depicting the facility and any park, scenic, or natural use area within a 1,000-foot radius of the proposed facility. Park, scenic, or natural use restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.g.

3.5 Wetlands

Owners/operators must ensure their proposed facility or lateral expansion will not impact wetlands during facility construction and operation. For facilities sited within a wetland area, owners/operators may need to obtain permits from the United States Army Corps of Engineers. Additional design requirements may apply to facilities located in wetland areas to address high water table and/or unstable areas. Documentation included with the site approval application should include a copy of the applicable National Wetlands Inventory map and letters from the United States Army Corps of Engineers or Natural Resources Conservation Service providing wetlands determination (see the References and Resources section for web links). Requirements for wetlands restrictions in Tier III solid waste facilities are contained in IDAPA 58.01.06.013.13.a.

3.6 Ground Water

Ground water is a valuable resource for Idaho. Approximately 95% of Idaho citizens get their drinking water from ground water. In addition, agricultural irrigation accounts for 60% of the total ground water withdraw in Idaho. Protecting ground water should be a high priority for all Idahoans. Once waste is disposed in an unlined impoundment, it becomes very difficult to determine whether or when contaminants are impacting ground water. Areas across the state have relatively shallow ground water or geology such as fractured basalt or sandy soil that may allow contaminants to migrate to ground water. More information is provided at [Ground Water in Idaho](#), and web links are provided in the References and Resources section.

Idaho's "Ground Water Quality Rule" (IDAPA 58.01.11) defines three aquifer categories in Idaho: sensitive resource, general resource, and other resource. Sensitive resource aquifers receive the strongest level of protection. Stricter standards may apply to activities over a sensitive resource aquifer to ensure ground water is protected. Currently, the Spokane Valley-Rathdrum Prairie Aquifer is the only designated sensitive resource aquifer in Idaho.

NSWI facilities should be sited and designed to protect the first seasonal ground water encountered below the surface of the ground, or the upper-most water-bearing zone. A hydro-geologic investigation should be conducted to identify this depth and any drinking water aquifers that underlay the site.

To fully protect ground water, NSWI owners/operators should carefully consider the characteristics of the proposed waste types accepted. While a waste stream may be nonhazardous, constituents in the waste may, if improperly managed, impact ground water. EPA's *Guide for Industrial Waste Management* provides an in-depth analysis of the issues relating to nonhazardous industrial solid waste management, including management within surface impoundments. EPA's *Industrial Waste Management Evaluation Model* is a software program that assists nonhazardous industrial solid waste facility owners/operators in determining the most appropriate waste management unit design to minimize or avoid potential impacts.

Unless equally protective design and operational measures are established as part of a site-specific Tier II classification determination, pumpable waste must be managed in lined impoundments. While impoundment liners are costly, remediating ground water impacted by pumpable waste can be significantly more expensive. Software models such as the Hydrologic Evaluation of Landfill Performance (HELP) Model, Unsat-H Model, and others can help determine the potential for impacts to ground water when modeling is performed by a qualified professional registered in the State of Idaho with experience using the model. Ground water restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.d.

3.7 Geologic Restrictions

Fault areas, seismic impact zones, and other unstable natural or man-made features may impact the facility's site and design elements that are intended to protect human health and the environment. A site evaluation of a proposed facility or lateral expansion for these factors should be conducted by a qualified professional registered in the State of Idaho to determine if potential geologic issues exist with the site. Geologic restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.e.

3.8 Property Line Restriction

The 100-foot setback from the active portion of the facility to the property line provides a physical separation from facility activities to surrounding neighbors. Even well-run facilities can produce some dust, odor, noise, and vectors. By providing this setback, the impact to neighbors and conflicts with surrounding property owners/users are reduced. Property line restrictions applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.01.f. MSWLF have a 200-foot setback requirement. NSWIs co-located at a MSWLF should meet the more stringent 200-foot setback requirement because the NSWI is considered an active solid waste management unit.

3.9 Site Map

In addition to the site criteria identified above, a site approval application must include a scaled map indicating the following:

- Highways, roads, and adjacent communities.
- Property boundaries.
- Total acreage of the site (indicate only the area to be used for waste management activities).
- Off-site and on-site access roads and service roads.
- Types of land use adjacent to the facility and a description of all facilities on the site.
- All water courses, ponds, lakes, reservoirs, canals, irrigation systems, and existing water supplies within 0.25 miles of the proposed facility property lines. Existing water supplies include known public and private wells, springs, and surface water intakes used as public or private drinking water systems.
- High-tension power line right-of-way, fuel transmission pipeline rights-of-way, and proposed and existing utilities.
- Proposed and existing fencing.
- Proposed and existing structures at the facility and within 500 feet of the facility boundary, including location of employee buildings and scales (if provided).
- Direction of prevailing winds.

Site map requirements applicable to Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.02.

3.10 Local Government Permitting

Owners/operators of a proposed NSWI should discuss their facility plans with county or city government early in the planning process to determine if separate local government approval is required. If the proposed facility site needs to be rezoned or granted a special use permit, this may delay construction and operation. Local government approvals are separate from DEQ's approval process under the Solid Waste Rules. Approval by one entity does not obligate another entity to approve a project.

4 NSWI Facility Design

In addition to site selection, facility design provides human health and environmental protection from the liquid wastes and waste constituents managed at the facility. Design elements should consider both site conditions and the characteristics of the waste to be disposed at the facility. NSWI owners/operators are expected to design impoundments according to professionally recognized industry standards and use the *Ten State Standards* and DEQ's *Wastewater Rules* and related guidance. EPA's *Principals of Design and Operation of Wastewater Treatment Pond Systems* may also be helpful. The NSWI facility design plan is presented to DEQ in a Design Approval Application.

NSWIs will be engaged in one or both of (1) the *treatment* of pumpable waste to reduce liquid content and collect the solids for proper disposal, and (2) the *processing* of pumpable waste into other, useable liquids or solids. Depending on the facility owner/operator's intent, such facilities may have facultative, stabilization, aerated, anaerobic, or total containment impoundments. The treatment trains may contain primary treatment, secondary treatment, and tertiary units. Much of the technology and nomenclature relating to these facilities will come from the wastewater industry and not the solid waste industry. DEQ expects NSWIs to design and describe engineered facilities using established wastewater industry standard treatment processes and use wastewater terminology in siting, design, and operational documentation.

Unlike operational activities, certain design elements such as a liners and leak detection systems are best installed before placement of any pumpable waste. Liners and leak detection systems are an added cost but, in most cases, are required to minimize and identify waste infiltration to ground water. Ground water remediation and closure of a facility can be more costly than a liner, leak detection system, and ground water monitoring. Known design costs can be calculated into fees imposed on customers and spread over the life of the facility. Unknown costs such as ground water remediation and closure are difficult to estimate. If a facility closes, money still must be spent on cleanup and closure/post-closure, yet no revenue is generated to offset these costs. Initial siting and design decisions may also limit future changes in operation, such as expansion of the waste types accepted, if based on modeling or other methods, the facility cannot accommodate the change and continue to protect human health and the environment.

Some operational information will be needed to properly evaluate facility design.

Owners/operators of proposed NSWI facilities will need to submit information describing the facility's operational design and capacity, including the waste types accepted and projected daily and annual waste acceptance volumes. Water balance calculations for each impoundment will be expected when evaporation is relied upon to reduce volume. Calculations that establish overall facility management capacity and volume acceptance capacity are necessary to ensure the facility is designed accordingly, the facility understands its waste volume limitations, and all the waste accepted at the facility is accounted for. More extensive operational information may be required at the time of site or design review if applying for a site-specific Tier II classification.

Compatibility of the waste types accepted and management of incompatible wastes should be analyzed by a qualified professional, and the analysis provided to DEQ. A compatibility analysis should address the creation of hazardous materials or conditions, creation of nuisance conditions such as odor, ability of waste mixtures to be processes or treated as intended, and effect of materials on the condition of the liner and other impoundment or waste management systems.

Wastewater professionals familiar with preparing and submitting plans and specifications under the Wastewater Rules can be accommodated during the application process. At the pre-application meeting, DEQ can discuss how the Design Approval Application relates to plans and specifications.

The Solid Waste Rules require owners/operators to submit facility design changes to DEQ for approval in advance. These changes include structure modifications, physical changes to impoundments, changes to stormwater controls, and any other physical modification to the facility. Owners/operators are encouraged to contact DEQ to determine whether a design modification application is required. Tier III solid waste management facility design

requirements are contained in IDAPA 58.01.06.013.c and d. The NSWI Design Approval Application is available on DEQ's web page, [Solid Waste in Idaho](#).

4.1 Design Application Map Elements

Design applications for proposed Tier III NSWI facilities or lateral expansions must include a map containing the following information.

4.1.1 Surface Water and Erosion Control System

The design application map must identify both stormwater run-on and stormwater run-off control systems including any ditches, berms, check dams, ponds, and other measures/features used for stormwater control. Stormwater control systems should also include calculations demonstrating how the system will manage, at a minimum, a 24-hour, 25-year storm event.

Temporary control measures should also be included in the design plan. Exact locations of temporary control measures are not needed, but discussions on when the control measures will be used and the purpose of each temporary control measure should be included.

When stormwater control design changes are anticipated, updated design plans must be submitted to DEQ for review and approval before implementing the design changes. Updated facility maps must also be included with the Operating Plan.

4.1.2 Proposed Impoundments and Waste Management Areas

Identify all proposed short- and long-term waste management areas and impoundments, including, but not limited to, areas where pumpable wastes will be initially received, evaluated, stored, and processed; any waste separation; solidification or bulking areas; and any sludge storage areas. All proposed impoundments and waste management areas to be developed on the proposed site must be identified on a map. Information on proposed impoundments and waste management areas should include the specific type of waste managed in each area or impoundment and dimensions for each area or impoundment.

4.1.3 Location of Non-waste Staging Areas

Proposed bulking materials, staging areas for any bulking materials and raw products, and stormwater control systems should be identified.

4.1.4 Design Topography after Facility Closure

The owner/operator will include the elevations expected after facility closure or a narrative description of the facility's topography after facility closure. Closure design should consider surrounding topography and future land use of the property.

A Closure/Post-closure Plan must be submitted to the local public health district before closure/post-closure activities. Owners/operators should become familiar with the specific closure/post-closure requirements in the Solid Waste Rules. Closure/post-closure is addressed in section 6.

4.1.5 Soil and Water Table Test Boring Holes, Wells, or Excavations

New and lateral expansion facility owners/operators must conduct site/geotechnical investigations to determine the underlying geology and depth to the highest known ground water table. These investigations can be completed using a variety of equipment that provides reliable information on the site characteristics.

Locations of any subsurface investigations should be carefully documented and provided on a map. Concentrate the investigations in the area where the impoundments are located. Site conditions such as soil type and depth to bedrock and ground water can vary across a site.

Owners/operators of new NSWI facilities may need to complete a site investigation as part of the site approval process. Owners/operators may use existing data that represent the geology and ground water under the area proposed for lateral expansion. If current data do not represent conditions under the area of the lateral expansion, additional investigation must be completed before lateral expansion approval.

4.1.6 Proposed Expansion

In addition to the location of impoundments and waste management areas proposed for active use, the maps must include information on how future impoundments and waste management areas will be laid out and how the owner/operator plans to develop each additional unit.

4.1.7 Topography

Maps should include contour lines at 5-foot intervals within the operating area and 10-foot intervals to the facility boundary.

4.1.8 Building and Construction Design Blueprints

NSWI facility owners/operators must include design plans/blueprints for all proposed structures and buildings at the facility that relate to managing the pumpable waste. After construction, an owner/operator is required to submit an accurate set of records or *as-built* plans, or an equivalent statement stating the design plans accurately depict the constructed facility. This submission also meets the record plans submission requirement in the Wastewater Rules.

4.2 Design and Construction Elements

NSWI facility owners/operators are expected to install some or all of the following systems and elements. Owners/operators must demonstrate the proposed systems will be constructed, monitored, and maintained according to manufacturer recommendations, and the systems provide adequate protection to human health and the environment. Requirements for the design and construction elements for Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.13.c.

4.2.1 Leak Detection System

In classifying solid waste management facilities, IDAPA 58.01.06.009.04 lists “leachate collection system” as a required aspect of a Tier III facility. DEQ determined the leachate

collection system requirement, as it pertains to NSWI facilities, is satisfied by installing, monitoring, and maintaining a leak detection system because the primary waste at a NSWI facility is in liquid form and in an impoundment. Leak detection systems may include a double-liner design, lysimeters, or underdrain systems. The requirement may be satisfied in some cases through additional operating criteria such as regular liner inspections and seepage testing. Most NSWI facilities use a combination of leak detection design and operational measures to ensure impoundment performance.

4.2.2 Liner

NSWIs are expected to install a liner (IDAPA 58.01.06.009.04). Liner design plans must prevent ground or surface water contamination and account for the types of wastes handled. Liner designs must be submitted to DEQ for approval. The submittal should include the type of liner to be installed, liner compatibility with the proposed wastes to be managed, quality assurance/quality control (QA/QC) practices to ensure the liner is installed to maintain liner integrity, and a demonstration that the liner will prevent downward migration of waste constituents and gas to the first seasonal ground water encountered below the ground surface, or upper most water-bearing zone.

The facility's Operating Plan should include a procedure to gauge liner integrity at regular intervals, as well as after sludge removal and other activities that may damage the liner.

4.2.3 Air Emission Control System

The Solid Waste Rules require Tier III solid waste facilities to install air emission control systems (IDAPA 58.01.06.009.04). This requirement may have limited applicability at some NSWI facilities, depending on waste types managed, design features, and operational factors. The facility can include an explanation on why this requirement is inapplicable in its Design Approval Application for DEQ review. When this requirement is applicable, facilities must provide air emission control system design plans to DEQ. The design plans should indicate the location of monitoring devices based on site-specific conditions and ensure that air emissions will not exceed 25% of the lower explosive limit for gases in facility structures and not exceed the lower explosive limit at the property boundary.

4.2.4 Odor Management

All owners/operators of proposed NSWI facilities are expected to submit an odor management plan as part of the facility's Operating Plan. Odor management may include both design elements and operational measures, and design elements should be identified in the Design Approval Application (see the Reference and Resources section).

4.2.5 Ground Water Monitoring

Installing a ground water monitoring system with a sufficient number of up-gradient and downgradient wells provides an early warning system should waste constituents reach ground water passing under a facility. Owners/operators who install ground water monitoring systems also demonstrate to neighbors that the facility understands the importance of ground water and provides a level of confidence to downgradient users that ground water is not impacted.

Tier III solid waste facilities are required to install ground water monitoring systems and must submit design plans identifying the location of proposed wells at the point of compliance, soil types at the site, depth to ground water, and ground water flow direction. If an applicant requests a site-specific classification as a Tier II facility, other design and operational measures must be installed to ensure the system as a whole is equally protective. Depending on site-specific factors, a combination of liner, leak detection systems, and seepage testing may be equally protective.

If ground water monitoring is required, the owner/operator shall submit a copy of the geologic log and record of well construction to DEQ for each well within 30 days of well completion. A Ground Water Monitoring Plan must also be submitted and approved by DEQ indicating monitoring frequency (quarterly unless otherwise approved by DEQ), constituents monitored, and QA/QC sampling procedures. The ground water monitoring plan should be integrated into the facility's Operating Plan.

4.2.6 Sludge Management

Most NSWI facilities are expected to generate sludge, and the facility design should accommodate all sludge management activities required, including any sludge-drying facilities, solidification operations, and storage. Design/site plans should include the location of all sludge management areas.

A sludge management plan, including sampling protocols, storage time frames, and disposal methods and/or locations, should be included in the facility's Operating Plan. The requirements in IDAPA 58.01.16.650 may apply to the sludge generated at NSWIs, and facility design should accommodate these requirements (section 5.9).

4.2.7 Stormwater Management

A site-wide stormwater management plan should be prepared and submitted during the design review process. Stormwater structures and physical elements will also be depicted in the facility design map and in the plans and specifications, if applicable. The facility may also be required to obtain an NPDES/Idaho Pollutant Discharge Elimination System stormwater permit. The stormwater management plan should be incorporated into the facility's Operating Plan.

4.3 Design Submission and Review Process

Because pumpable waste is also considered to be nonmunicipal or *industrial* wastewater under the Wastewater Rules, DEQ expects design application submissions by NSWI owners/operators to meet the substantive requirements of IDAPA 58.01.16.401, as well as the Solid Waste Rules. As with all solid waste facility applications, DEQ offers applicants a pre-application conference to discuss approval procedures, application contents, timetables for application processing, and design requirements.

DEQ highly recommends applicants engage with the agency at least 6 to 12 months before the anticipated submission of a NSWI design application. The design approval application for NSWI facilities should be prepared by or under the supervision of an Idaho licensed professional

engineer and shall bear the imprint of the engineer's seal. Once submitted, the application review timeframes and procedures in the Solid Waste Rules apply.

Construction may begin once design approval from DEQ has been received. Construction should be observed by an Idaho licensed professional engineer or by staff supervised by a licensed engineer.

Record or "as-built" plans must be submitted under a licensed engineer's seal as set out in IDAPA 58.01.16.401.04. Changes to facility design require updates to the facility's record plans, including any change to the location of waste-handling, sludge management, and bulking material storage areas. The facility record should reflect all design and operational changes so in the event of a release, remediation activities can be effectively employed. This record is important during the operational life of the facility as well as during and after facility closure.

5 Impoundment Facility Operations

The daily operation of a NSWI facility has a significant effect on whether the facility is protecting human health and the environment. A poorly operated facility can negate the effort that went into properly siting and designing it.

Owners/operators of NSWI facilities are required to develop an Operating Plan and submit it to DEQ for approval (see Glossary—Operating Plan). Once approved, Idaho regulations require NSWI owners/operators to have the approved Operating Plan on site, and the facility must be operated according to the plan. Facilities should seek approval to update their Operating Plan before making any operational changes. An Operating Plan serves several purposes, but its primary usefulness is as a reference guide or facility manual for staff. New employees can become familiar with nearly all aspects of the facility by reviewing a well prepared and up-to-date Operating Plan. The plan can also be used by staff when unusual or emergency situations arise or if unfamiliar waste types are encountered. While an Operating Plan cannot be written to address every possible situation, it should be written so that most foreseeable situations are addressed. If a situation arises that is not specifically covered in the Operating Plan, the plan should include the contact information for a senior decision-maker who staff can contact.

The following section discusses solid waste facility operating requirements detailed in IDAPA 58.01.06.013. MSWLFs regulated under the ISWFA are expected to integrate their NSWI operations into the overall facility Operating Plan. Other required plans, such as an Odor Management Plan or a Sludge Management Plan, can be incorporated by reference into a facility's Operating Plan as separate sections or chapters to avoid duplicating the operational aspects of these plans in the Operating Plan.

A revised Operating Plan must be provided to the local public health district for review and approval before changes occur to facility operations, including, but not limited to, changes to waste types accepted at the facility, types of wastes mixed or consolidated, waste monitoring and measurement, waste placement, where waste is taken or stored during periods when the impoundments are inaccessible, and the maintenance or operation of leak detection and other environmental monitoring and control systems. Some changes will also require submitting a design modification application to DEQ.

5.1 Waste Acceptance at NSWI Facilities

NSWI facilities can be authorized to accept a broad range of pumpable waste types so long as the facility is sited and designed appropriately, and the Operating Plan authorizes the acceptance of those waste types. All waste types that will be managed at the facility must be adequately identified in the facility's Operating Plan. Non-VSQG hazardous waste cannot be accepted at NSWI facilities. This type of waste includes EPA-listed waste and hazardous wastes that are ignitable, corrosive, reactive, or toxic. More information is provided on DEQ's web page and in the fact sheet, [How to Determine Your Generator Status](#).

One of the major regulatory challenges for solid waste facilities that manage bulk liquids is designing and implementing a procedure to reliably detect and prevent acceptance of regulated hazardous waste. Only permitted hazardous waste treatment, storage, and disposal (TSD) facilities are authorized to accept hazardous waste (Idaho Code §39-4408). Accepting hazardous waste at a facility not permitted as a TSD is illegal regardless of what the generator's accompanying paperwork says, so a NSWI facility's acceptance procedure is important. Accepting hazardous waste without a TSD permit, even inadvertently, potentially subjects a facility to significant enforcement penalties and clean-up costs. *Knowingly* accepting hazardous waste can subject a facility to criminal penalties and large fines (Idaho Code §39-4415). While it is the waste generator's obligation under the law to properly characterize their waste as hazardous or nonhazardous, the NSWI facility's owners/operators are obligated to avoid accepting hazardous waste and avoid becoming an illegal TSD facility.

The facility's Operating Plan is expected to describe the waste acceptance process, how the facility will address waste compatibility, if applicable, and where within the facility each waste type will be transported and managed after acceptance.

5.1.1 Written Waste Acceptance Policies

Owners/operators of NSWI facilities are expected to develop waste acceptance policies for the waste types accepted. Written waste acceptance policies provide an effective means to communicate facility expectations and requirements to customers, provide assurance to regulators that the facility is properly overseeing what materials are entering their facility, and robust waste acceptance policies reduce risk and potential liability for the facility. These policies should be made available to customers and inform them of (1) the required waste content parameters and (2) the information required to accompany each type of waste. Waste acceptance policies may be for individual types of waste or for broad categories of waste. DEQ encourages facilities to develop and implement waste acceptance policies requiring analytical test results submitted for some or all loads of certain waste types, including, but not limited to, the following:

- **Any waste where the generator does not have control over, or full knowledge of, its content.** An example is waste from a 24-hour, unstaffed car wash sump, which has little or no oversight of the entry of wastewater and other materials to its sumps. Because the generator does not know the sump's content, reliable information cannot be obtained without analytical test results.
- **Any waste generated from an unknown process or location.** NSWI facility owners/operators must be aware of the waste source and process that generated it.

Without this information, facilities have no means to measure the accuracy of the generator's statements about the content of the waste. Information verification reduces risk and potential facility liability and provides regulators with assurances the facility is only accepting materials it was sited and designed to manage.

Managing pumpable waste involves many inherent risks. When a generator does not provide and a facility does not require analytical test results, the facility takes on greater risk that the material contains unknown and possibly hazardous or incompatible constituents. To avoid this risk, a robust, well-designed waste acceptance policy can be developed for each type of waste accepted at a facility, or for categories of waste. DEQ recommends these policies be prepared with the assistance of a qualified professional familiar with waste compatibility issues and the waste or industrial processes involved. These waste acceptance policies become an integral part of the facility's Operating Plan.

When NSWI owners/operators or their technical consultants develop a waste acceptance policy, one of the threshold questions is whether the facility should accept that particular type of waste (1) without any analytical data, (2) with analytical data on an initial load and some number of subsequent loads on a scheduled basis, or (3) with analytical data on each load. Many factors must be accounted for in making these policy decisions, including facility design, training and experience of waste-screening employees, and facility-wide policies like frequent sample collection and random confirmation testing. For example, a Tier III facility with state-of-the-art liners, leak detections systems, and ground water monitoring may choose to collect samples of every incoming load of waste, store them for 6 months, and publicize that it randomly tests 3% of accepted loads to confirm their content.

All waste acceptance policies should require customers to update waste/process paperwork when any changes occur to the process that generates the waste. For example, a longstanding customer with a truck washing operation that only washes on-road dairy vehicles delivers wash area sump waste to a NSWI under a waste acceptance policy that does not require submitting analytical test results. If that washing operation begins to wash vehicles used to clean up and carry solvent spill material, the waste acceptance policy should require the customer to update their waste/process paperwork so the determination to accept the waste without analytical data may be revisited.

5.1.2 Catalogue of Other Waste Acceptance Safeguards and Procedures

All solid waste facilities are expected to fully address waste acceptance criteria, policies, and procedures in the facility's Operating Plan. Facilities must demonstrate (1) the facility has a program in place to identify and exclude hazardous waste, and (2) the facility is only accepting waste types that it was sited and designed to manage. A facility's most effective safeguard is to require customers to follow well-developed waste acceptance policies. Some additional management practices and safeguards also play an important role:

- **Training:** No policy or paperwork can be successful without alert and properly trained staff. Staff can identify problems, including incomplete, suspect, and even fraudulent paperwork. All staff involved in accepting waste should be adequately trained to implement waste acceptance procedures, identify the waste types that the facility's Operating Plan allows the facility to accept, monitor for waste types that are hazardous and cannot be accepted, and request more information when a waste is presented at the

facility that requires more information before it can be accepted. Training facility staff is the best defense against inadvertent acceptance of hazardous waste and the consequences that follow. A thorough and regularly scheduled training protocol should be established in the facility's Operating Plan, and training should consist of industry-standard off-site courses and certifications when available.

- **Waste Profile:** NSWI facility owners/operators or their technical consultants may develop a *waste profile* for each waste from each customer, including separate profiles for different sites generating the same waste, if appropriate. The waste profile should include the generator's waste characterization and information about the process that generated the waste, the location of generation, information about the generator, and any other information required to determine waste compatibility. The full waste profile can be kept on site to pre-qualify the acceptance of certain types of waste under specified conditions. Waste profiles should be updated on a regular basis and when any of the information on the profile changes. An example pumpable waste profile form is provided in Appendix B.
- **Waste Rejection or Segregation:** The waste profile or other required paperwork accompanying each waste shipment should adequately identify the waste type and properly characterize the waste as nonhazardous. Trained staff should scrutinize the paperwork to identify incomplete and inconsistent information. Facilities are encouraged to identify and differentiate high-risk waste types, and subject those to closer scrutiny. This heightened scrutiny can be integrated into a more stringent waste acceptance policy. Wastes not meeting the applicable waste acceptance policy should be rejected or segregated from other wastes until confirmation sampling results are obtained. Confirmation sampling is discussed in more detail in section 5.1.3. Operating Plans must discuss monitoring and handling procedures for unauthorized waste. Facilities may be designed with holding areas to properly segregate waste while waiting for sampling results.
- **Screening and Logging Incoming Waste:** Gate attendants should visually inspect every load that enters the facility and scrutinize the waste profile or other paperwork accompanying every load. Measuring incoming loads either by weight or volume can assist with facility planning. Monitoring incoming waste and recording this information on a daily log can assist with future waste acceptance decisions, assess remaining capacity, and determine future design capacity needs. A record of all rejected loads should be maintained in the facility record that documents the contents of the load, reason the waste was rejected, driver's name, vehicle license number, and any other pertinent information. This process allows the facility to identify problem customers, impose additional requirements, or prohibit access to the site. Report fraudulent behavior to DEQ.
- **Random Load Inspections:** All loads should be subject to random load inspections. For pumpable wastes managed at NSWIs, facilities should consider collecting samples from every load for all waste types other than those deemed low-risk. A percentage of these samples, along with samples from high-risk waste types and suspect wastes, should be subjected to confirmation testing. Ensure all samples collected for future analysis are identified, tracked, and stored in conformance with established QA/QC standards. Confirmation testing and sampling is discussed in section 5.1.3.3. Sampling every load and randomly subjecting loads to confirmation testing tells customers they may be caught

if they misrepresent the delivered waste, even if they are not caught immediately. A published policy of periodically calling generators to confirm waste shipments may also provide added assurance that waste loads are as represented.

- **Contract Liability:** It is good practice to hold the haulers and generators contractually responsible for wastes delivered to the facility and to ensure the waste is not hazardous. Holding both hauler and generator jointly liable for any hazardous wastes discovered after acceptance and costs borne by the facility in managing and removing the hazardous waste can reduce owner/operator exposure to the inherent risks associated with managing pumpable waste. Note however that a facility owner/operator may not eliminate legal responsibility for cleanup or penalties through contractual arrangements.
- **Licensed Haulers:** The seven health districts issue licenses to haulers of domestic septage. A facility may choose to accept waste only from these licensed haulers, regardless of the waste type being hauled.
- **Customer Education Materials:** Customers who are not typically considered industrial manufacturers or processors may have limited knowledge of their responsibilities or understand the methods required under the Resource Conservation and Recovery Act (RCRA) to properly characterize their waste. Both transporters and facilities play an important role in educating these customers. DEQ can partner with facilities in developing and disseminating educational materials to assist specific public sectors.
- **pH Testing:** The acceptable pH range for pumpable waste is between 2.0 and 12.5. Waste with a pH range outside of these parameters is considered hazardous waste and cannot be accepted at a NSWI. Some POTWs have required pH testing of all incoming pumpable wastes, both as a hazardous waste screening measure and as a limited confirmation that the waste is what the generator presents it to be for compatibility purposes. The pH test results gives the facility a general sense that the waste is as the transporter or generator represents, but it cannot identify the waste content.

Over time, the consistent application of the practices listed above will help the facility manage risk, reduce liability, protect facility workers, and maintain the environmental integrity of the site.

5.1.3 Waste Sampling Procedures

A generator's evaluation of whether a waste is hazardous, a transporter's decision to accept a load for transport, and a NSWI owner/operator's decision to accept and manage a load of pumpable waste may be based on incorrect information if sampling is not performed properly. Proper techniques, as found in 40 CFR 136, must be used for sample collection, preservation, storage, and analysis if reliable results are expected to be obtained. Owners/operators of NSWI facilities may use the information in this section when designing their own protocol for sample collection, storage, and testing. Facilities may also use the information to educate transporters and customers on designing their own protocols. DEQ's *Pile Sampling White Paper* may be useful for preparing a plan to sample sludge or sediment removed from an impoundment. In-place sampling of impoundment sediments and liquids may require a plan that addresses any waste settling or separation that has occurred.

The basic types of samples are grab and composite samples. Both types of samples are collected manually. The decision to use grab or composite sampling depends on several factors:

- Composition of the waste received
- Pollutants analyzed
- Physical setup of the receiving station
- Purpose of the sample
- How well the load is mixed

5.1.3.1 Grab Sampling

A grab sample is a single discreet sample collected over a short time period without regard to the waste stream flow. Grab samples are a useful snapshot of a discharge and provide information on the extreme pollutant concentrations of a load; composite sampling may mask the extreme pollutant levels. Grab samples may be used if both flow and pollutant concentrations or loadings are constant and should only be employed if the waste contained in a pumper's truck is homogeneous. Grab sampling is used when collecting composite samples is not appropriate. For example, grab sampling is necessary for such parameters as pH, oil and grease, temperature, total phenol, cyanide, sulfides, and volatile organics.

5.1.3.2 Composite Sampling

A composite sample is a mixed or combined sample formed by combining a series of individual and discrete grab samples collected over a time period or representing more than one specific location or depth. Composite samples measure the average amount of pollutants discharged by a waste hauler during the entire discharge period. Composite sampling of pumpable waste consists of collecting time-proportional samples at specified intervals during a discharge. For a nonhomogeneous discharge, wastes are stratified in the hauler's tank, and the effluent quality will vary over the discharge period. For this situation, the composite sample collected over the discharge period would be most appropriate. Grab (discrete) samples should be taken at least three times during the discharge and then composited: once at the onset of the discharge, where a higher concentration of solids are likely to occur, once in the middle of the discharge, and once at the end of the discharge where light oils are most likely to appear.

5.1.3.3 Sampling Frequency

DEQ recommends every NSWI include some form of confirmation sampling in their suite of waste acceptance safeguards, and establishing frequency is an important aspect of any confirmation sampling program. Each waste acceptance policy may establish the required frequency of sampling and analysis required of the customer. NSWI owners/operators should consider a number of issues when establishing a customer's required sampling frequency:

- Frequency necessary to obtain data representative of the nature and volume of the hauled waste
- Frequency necessary to deter unscrupulous haulers from delivering and discharging incompatible wastes
- Actual (or potential) impact of the hauled waste on the NSWI operation, compatibility with other wastes, and sludge disposal practices
- Hauled waste source and types and concentrations of pollutants contained in the waste
- Regulatory requirements of any permits, local ordinances, facility policies, and federal regulations

- Seasonal variations in the volume and makeup of hauled waste
- Trends in delivery times
- Compliance history of the waste hauler

NSWI owners/operators should establish a base sampling frequency for each waste type or each category of waste, and increase or decrease the frequency on a case-by-case basis using the factors discussed above. A base sampling program for pumpable waste may include the following:

- Visually observing and recording any unusual odors, color, or other characteristics
- Monitoring pH
- Collecting a grab or composite sample of the hauled waste (for later analysis if necessary)

While an effective deterrent, collecting samples may not provide complete protection from incompatible loads, as it can provide information only if analyzed. NSWI owners/operators may need to perform a quick analysis of a load before discharging to the impoundment system for any number of predetermined or suspect parameters. Analyzing for pH is perhaps the most effective way to discover incompatible loads, and it can be performed rapidly, without great cost to the NSWI or the waste hauler. The results of a pH test can give the facility a general sense the waste is what the transporter or generator claims, but it cannot identify the waste content.

The example sampling programs described below broadly categorize accepted wastes—domestic septage and everything else. These examples are offered for their simplicity and are not a suggested way to categorize waste:

Example 1: Comprehensive sampling and analysis of all nondomestic-hauled waste and periodic sampling and analysis of domestic septage—All hauled wastes of nondomestic origin are sampled and analyzed, and every tenth load of domestic septage received from each hauler is sampled and analyzed.

Example 2: Comprehensive sampling of all hauled wastes and periodic or random analysis of the collected samples—A sample is collected from each hauled waste load. These samples are preserved and stored according to established standards, and a portion of the samples are analyzed. Each hauler knows all of the loads will be sampled but does not know which loads will be analyzed before their holding time expires. If a disruption in facility operations occurs, the stored samples are used to determine the exact makeup of the load causing (or suspected of causing) the disruption. If several loads were received, the stored samples of all these loads can be analyzed to identify the waste hauler and waste load causing the disruption.

Example 3: Random sampling and analysis—The NSWI facility randomly selects a day to conduct sampling, and all waste loads received that day are sampled and analyzed, or the NSWI may collect and analyze samples every day but randomly selects the loads to be sampled and analyzed (i.e., every fifth truck or seven random samples per day).

5.1.3.4 Testing Parameters

The purpose of generator-required waste characterization in RCRA is limited to determining whether the waste is hazardous. Depending on how wastes are managed at the facility, additional analysis to determine compatibility with other wastes may be necessary. Whether a customer or

NSWI facility staff performs the analytical testing for a particular waste type, DEQ suggests the initial waste characterization take place over a series of waste loads, or if there are seasonal variations to the waste, over a period of several months to more than a year. Pollutants of concern identified during characterization should be used to establish the parameters for a routine monitoring program, as discussed above.

A customer's routine monitoring data, if available, may identify potential waste constituents. Metals typically identified at *highest* average levels in pumpable waste may include iron, zinc, copper, lead, chromium, and manganese. The most *frequently* identified metals may be copper, nickel, chromium, and lead. Organics likely identified at highest average levels may be acetone, isopropyl alcohol, methyl alcohol, and methyl ethyl ketone. NSWI owners/operators should anticipate that pumpable waste may contain relatively high levels of heavy metals and organic solvents. The type and level of pollutant present will vary depending on the type of waste (e.g., domestic septage, landfill leachate, ground water remediation site waste, or other industrial wastes) and site-specific factors. NSWI staff should periodically sample loads of certain waste types to determine if there are site-specific pollutant concentrations and loadings for the metals listed above, common organic solvents (especially ketones and alcohols), and any other identified pollutants of concern.

5.2 Common Waste Types and Categories

A number of common waste types and categories are described below, along with suggested waste acceptance criteria aimed at protecting NSWI facilities from inadvertently accepting hazardous waste. Certain pumpable wastes are more susceptible to containing hazardous waste than others. Those waste types may require additional safeguards be applied before acceptance. If a facility proposes to describe wastes they plan to accept using general category descriptions, each category should be sufficiently described so that DEQ can identify whether a particular waste type can be accepted at the facility.

Accepting a waste type that was not identified in the siting or design of the facility, or accepting a waste not identified in the facility's Operating Plan, can lead to enforcement actions or major process upsets at the facility. Waste acceptance is never an ad-hoc decision.

5.2.1 Grease Trap Waste

Grease trap waste typically originates from a plumbing device (grease trap, grease interceptor, grease recovery device or, grease converter) designed to intercept the majority of greases and solids before they enter a POTW. The content of grease trap waste originating from a restaurant or food service location is generally well known, and it is usually appropriate for a generator to rely on *acceptable knowledge* for this type of waste when performing their waste characterization required under RCRA. General safeguards for accepting waste should be included in the facility's Operating Plan, and customers should be informed through a written policy.

5.2.2 Wastewater from Industrial Production Processes

While many industrial processors and manufacturers store and treat the wastewater they generate themselves on-site, some facilities outsource these activities to NSWIs. Each industrial process is

unique, and NSWI facility staff must fully understand each process to confirm the contents of any pumpable waste presented for acceptance. Waste loads from a single industrial production process over time typically have uniform constituents, and waste shipments may differ only within a range of constituent concentrations. Food processing waste is common in Idaho, and many of these processes create organic wastes with high nutrient content and potential for odor. Facilities that accept these wastes should pay special attention to treatment, odor management, sludge management, and sludge disposal in their Design Approval Application and Operating Plan. DEQ strongly recommends NSWI facilities require a detailed waste profile and a specific waste acceptance policy delineating the parameters of each waste before acceptance.

5.2.3 Wastes from Oil and Gas Exploration, Production, and Operations

Oil and gas wastes are generally exempted from the management and disposal requirements applicable to hazardous waste, but they remain regulated as solid waste and may still contain hazardous constituents that may require costly remediation if managed poorly. Hazardous constituents may concentrate in sludge generated at the facility. These factors should be considered when deciding whether to accept one or more of these wastes and when siting and designing a NSWI facility. NSWIs may also consider implementing a testing or confirmation protocol to ensure technologically enhanced naturally occurring radioactive material (TENORM) is identified and excluded from the facility (IDAPA 58.01.10). Waste acceptance policies should require initial waste characterization by submitting analytical test results for each production site because geology can affect the types of fluid used in the process. Waste compatibility and hazardous waste generation in sludge at the NSWI facility are the factors driving DEQ's recommendation.

5.2.4 Pumpable Wastes from Sumps, Pits, Trenches, Traps, or Similar Sources

Many facilities have devices referred to as sumps, pits, trenches, or traps, designed to collect debris and dirt before entering the sanitary sewer system or otherwise discharged. DEQ refers to these devices as *sumps*, and the sand, grit, dirt, liquids, and sludge removed from these devices as *sump waste*. Examples include waste from equipment wash down collection pits, car wash sumps, parking lot/stormwater sediment traps, and similar devices. Sump wastes require close scrutiny before acceptance. To determine whether analytical testing of the waste should be required before acceptance, consider factors such as public access controls at a wash facility sump, the type of vehicles or equipment washed at a site, and the land uses surrounding a stormwater basin.

Sump waste retrieved from sumps accessible only by the party controlling and using the sump are more likely to produce wastes with consistent content. When a sump produces consistent content, it may be appropriate for a NSWI facility to rely on a generator's waste characterization that uses acceptable knowledge. However, other factors may need to be considered, such as whether the process or activities that contributed content to the sump or source has changed. The types of vehicles or equipment washed, or the types of materials likely to be washed off the vehicles or equipment, are examples of a change in process.

Typically, a NSWI facility may initially require analytical testing to confirm that a waste from a particular sump is nonhazardous and to analyze compatibility. After submitting the initial analytical results and developing a source profile, confirmation sampling can be required at

regular intervals, typically on an annual or biannual basis. Multiple sump locations at a single facility may require separate waste profiles to track each source independently.

Waste retrieved from sumps accessible by the public can have unpredictable content. Stormwater drains and 24-hour unstaffed carwash sumps, for instance, provide an attractive means to dispose of unwanted and sometimes hazardous materials. Many POTWs no longer accept waste from these types of sources because of their unpredictable content or because of specific instances of hazardous waste entering the wastewater facility from such sources. Any facility accepting waste from these types of sources should establish stringent safeguards to protect the facility from inadvertently accepting regulated hazardous waste. It is inappropriate, in most cases, for generators of waste from these uncontrolled sumps and other sources to rely on process knowledge when making their waste determination required under RCRA.

Facilities accepting wastes from uncontrolled sumps and relying on process knowledge may be putting their facility in a position of financial and regulatory risk. The most protective approach for facilities accepting waste from uncontrolled sumps and other sources is to require analytical testing of every shipment or load.

Per- and polyfluoroalkyl substances (PFAS) are an emerging constituent of concern whose regulatory status is expected to evolve. Although use of PFAS in many products has been phased out, historically these compounds have been found at car washes because of their water-repelling characteristics (section 5.2.14).

Sumps that collect from roadways and parking lots will have thousands of chemicals, some of which are emerging constituents of concern. The presence of emerging constituents of concern will not form the basis of a regulatory action, but proper stewardship of resources and property may require owners/operators to keep apprised.

More information on hazardous waste characterizations and sump waste is provided in [Managing Sump Waste](#).

5.2.5 Leachate from Waste Disposal Sites

Landfill leachate has historically been sent to POTWs for disposal, but NSWIs may provide an attractive alternative. NSWI owners/operators should engage technical consultants to determine if landfill leachate should be accepted and to develop a waste acceptance policy. Research is available on typical leachate content, but each landfill will generate leachate with its own characteristics, and even at the same landfill the content of leachate may change significantly over time. Customer submission of analytical testing results to the NSWI with every shipment is recommended, both to establish it as nonhazardous and for compatibility analysis. PFAS may be found in landfill leachate at elevated levels if the landfill has accepted concentrated sources in the past. Low levels of PFAS can be expected in all leachate given their widespread use in consumer products (section 5.2.14).

5.2.6 Fuel-Contaminated Wastewater

For fuel-contaminated wastewater, a NSWI facility owner/operator's concern is likely this waste's ignitability and compatibility with other wastes. Because each load of fuel-contaminated wastewater is likely to have different concentrations, analytical test results for each load may

assist in compatibility determinations and waste management decisions. DEQ's [FAQs: Management of Test Fluid from Underground Storage Tank Equipment](#) may assist NSWIs that plan to accept this type of waste.

5.2.7 Concrete Hydro-demolition and Hydro-excavation Slurry

Concrete hydro-demolition waste may include excess concrete debris, dewatered tank precipitate, and hydro-demolition water. A generator may be required to treat hydro-demolition water to neutralize pH before transport to a NSWI for disposal. At a minimum, DEQ recommends that NSWI owners/operators make customers aware the facility will perform routine confirmation sampling of this type of waste.

Hydro-excavation of uncontaminated soil with uncontaminated source water does not create a regulated solid waste. This material would be considered inert under the Solid Waste Rules and does not require disposal at an authorized solid waste facility. Due to the potential for high levels of total suspended solids, the discharge of this material to or near surface waters may be problematic. DEQ's Surface Water Bureau can provide direction on how and where this material can be discharged. If either the source water or the soil is contaminated, a generator should analyze the waste and have a qualified professional review the results to determine how it may be disposed.

5.2.8 Ground Water Remediation Wastewater

Similarly, ground water remediation wastewater will have its unique pollutant concentrations. The particular constituents will also vary depending on the remediation project. Analytical test results for each load may assist in compatibility determinations and waste management decisions.

5.2.9 Wastewater from Cleanups and Emergencies

Each load of wastewater from a cleanup or an emergency situation will be unique. Analytical test results for each load may assist in compatibility determinations and waste management decisions.

5.2.10 Domestic Septage

Septage and *domestic septage* refer to the contents removed from septic tanks; portable toilets; privy vaults; wastewater holding tanks; type III marine sanitation devices; recreational vehicle holding tanks; very small wastewater treatment plants; or semipublic facilities (e.g., schools, motels, mobile home parks, campgrounds, and small commercial endeavors) that receive wastewater strictly from domestic sources, which is usually, or potentially, human waste. *Nondomestic septage* is not used in this guidance due to its imprecise and inconsistent use, but it would generally describe pumpable waste.

The "Individual/Subsurface Sewage Disposal Rules" (IDAPA 58.01.03.050.03.d) and "Rules Governing the Cleaning of Septic Tanks" (IDAPA 58.01.15) state a site may accept domestic septage for burying under earth or drying "in a location and by a method" approved by DEQ. An owner/operator of a NSWI facility may propose to accept domestic septage as part of its site, design, and Operating Plan approvals. DEQ will review the proposal as it reviews any other

domestic septage disposal request, as a part of the NSWI facility approval application. IDAPA 58.01.03.051 also requires haulers of this material to be licensed annually.

Comingling wastes containing domestic septage with other pumpable waste would require prior DEQ approval and is not recommended because comingled waste can pose odor and treatment challenges (sections 5.2.12 and 5.12). The mixture also creates regulatory challenges. After mixture, the waste and waste impoundment would be regulated under the Wastewater Rules as municipal wastewater to address the potential for human pathogens in the waste and impoundment and also under the Solid Waste Rules, to address the nondomestic constituents in the mixture. Mixing will result in additional and potentially costly operational requirements. Comingling domestic septage or any waste containing human waste with the potential for human pathogens, without prior DEQ approval, may also be grounds for an enforcement action.

Domestic septage that has not been mixed or combined with other types of waste before acceptance at a NSWI facility would not be expected to contain hazardous waste, but unstaffed vault toilets and other publicly accessible and unattended sources could contain unwanted materials and in some cases hazardous wastes. A facility should require analytical testing if there are indications that other wastes are present. Staff should remain vigilant and scrutinize loads and paperwork for inconsistencies that can reveal issues. Sites where septage is only consolidated and stored for transfer are regulated as septage transfer stations under the Wastewater Rules. The Reference and Resources section provides more information on septage management and disposal.

5.2.11 VSQG Waste

As a Tier III solid waste facility, a NSWI can accept VSQG waste if it is approved as part of its siting, design, and Operating Plan. Accepting this type of waste may be contingent on site conditions, or require additional design features and operational safeguards. While VSQGs are relieved of many of RCRA's onerous requirements, the waste itself poses the same risk to human health and the environment that it would pose from a larger generator, especially if wastes are collected and consolidated into larger quantities.

Certain VSQG wastes may be more likely to affect liner integrity. Facilities should carefully evaluate how a VSQG waste may affect equipment and materials during facility design.

Sludge removed from an impoundment is considered a new point of generation and requires the NSWI facility to analyze the content of the sludge to determine if it is hazardous waste. If a facility is accepting VSQG waste, the sludge may be more likely to concentrate constituents and test as hazardous. If this is the case, the NSWI may be considered a *Small Quantity Generator* of hazardous waste, or even a *Large Quantity Generator*, both of which require additional and specific waste management practices. Sludge determined to be hazardous waste requires proper disposal at a permitted TSD.

5.2.12 Pumpable Waste Loads Containing Multiple Waste Types or Sources

Waste haulers should be familiar with the NSWI's waste acceptance policies and only mix wastes from multiple generators or locations if the policy allows it. For example, mixing domestic septage with other pumpable wastes may cause the waste to be rejected at the NSWI

facility if it requires segregating domestic septage for storage and treatment. Similarly, a load of controlled source waste mixed with one uncontrolled source may lead to rejection, depending on the NSWI facility's waste acceptance policy for uncontrolled sources.

5.2.13 Prohibited Waste

NSWI facilities may not accept non-VSQG hazardous waste, municipal wastewater, TENORM, or waste types not identified in the facility's Operating Plan. Facilities should provide a list of waste types not accepted so that customers and potential customers are fully aware of these limitations.

5.2.14 Per- and Polyfluoroalkyl Substances

Some pumpable wastes from ground water remediation projects or PFAS source cleanups may contain concentrated sources of PFAS if the source state has restricted PFAS disposal. Analytical testing is not advised at this time due to (1) the prevalence of the chemicals and (2) a lack of consensus on a meaningful regulatory limit. NSWI facility owners/operators are advised to require customers certify whether waste shipments contain any of the following:

- Waste derived in whole or in part from a cleanup of PFAS-related compounds
- Waste derived in whole or in part from a facility producing such compounds
- Waste derived in whole or in part from a concentrated PFAS product like aqueous film-forming foam concentrates (AFFF)
- Another concentrated source of PFAS-related compounds

DEQ may require additional operating criteria at facilities accepting concentrated sources of PFAS. The References and Resources section provides up-to-date information on PFAS and emerging regulations.

5.3 Signs

Signage at each entrance to a NSWI facility is required and informs customers of the facility's name, hours of operation, waste types accepted, and an emergency contact. Signs should be easily readable by those entering the facility and lettering should be large enough to be seen from a reasonable distance. Poorly located signs or small print can lead to misunderstandings with customers and additional work for the staff. Providing information such as fees, prior notification for special wastes, and other information can help educate NSWI customers. Requirements for signage at Tier III solid waste management facilities are contained in IDAPA 58.01.06.013.03.b.

While not required by the Solid Waste Rules, signs *within* the facility can help direct customers to specific areas such as those designated for specific types of waste. The sign should clearly list specific waste types that may be placed or are not allowed to be placed in the designated area.

5.4 Speculative Accumulation

Speculative accumulation is prohibited at solid waste facilities. The Solid Waste Rules define speculative accumulation as "stock piles of materials or recyclables to be processed for reuse or disposal when fifty percent (50%) of the material is not reused or disposed by the end of the

following calendar year after the date of first receipt by the facility, and which may create a nuisance or public health impact” (IDAPA 58.01.06.005.45).

For example, if a facility started stockpiling a material on January 2, 2014, and accumulated 300 cubic yards of the material, the facility would have until December 31, 2015, to dispose or reuse at least 150 cubic yards of the material. For NSWIs, the speculative accumulation prohibition may apply to pumpable waste received, or stockpiles of sludge or solidified material awaiting reuse or disposal.

For pumpable waste received, NSWI facilities are required to provide calculations in the design approval application pertaining to their operational design capacity and any methods of liquids reduction that will be employed. This information should show the facility capable of meeting the speculative accumulation requirement by illustrating the required minimum of 50% reduction of pumpable waste received or that it is processed into a new material, within a 12-month period. These new materials and any sludge or other process outputs will also be subject to the speculative accumulation requirement. While application information is expected to show the facility’s capacity to comply, NSWI facilities are also required to maintain records illustrating the facility is in actual compliance with the speculative accumulation provision. If a facility’s plans for treatment or processing of pumpable waste do not meet this regulatory requirement, DEQ may approve an alternative material retention limitation.

Stockpiling and any recycling or reuse of materials should be adequately described in the facility’s Operating Plan. DEQ supports legitimate efforts to recycle or reuse materials and will assist facilities entertaining recycle and reuse options.

5.5 Communications

Operating Plans should identify communication equipment available on site and emergency response notification. Communication requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.e.

5.6 Fire Prevention and Control

Tier III owners/operators are required to include fire prevention and control measures in their Operating Plans. Fires can occur for a variety of reasons. Spontaneous combustion of organic materials, incompatible wastes, equipment exhaust systems contacting combustible waste, or dry vegetation are all potential causes of fires. Owners/operators must be prepared by having a plan to deal with fires. Staff should understand the waste types accepted at the facility, have adequate firefighting equipment, and know when to fight fires and when to contact the local fire department. Operating Plans should contain emergency contact information that is posted beside or programmed into the landline telephones. If personnel are provided cell phones, emergency contact information should be programmed into cell phones. Fire Prevention and Control requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.f.

5.7 Facility Access

To prevent uncontrolled dumping, vandalism, and liability from injury, all facility owners/operators must secure their sites when staff is not on duty by using adequate fencing and natural features. Natural features may include large water bodies, rugged terrain, or other similar features that limit vehicle and foot traffic from entering the facility. When staff is not present, entrances should be controlled with locked gates. Facility access requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.g.

5.8 Odor and Nuisance Control

All owners/operators must control for nuisances. Nuisance issues are one of the public's primary concerns surrounding solid waste sites. Odor, vectors (e.g., flies and rodents), and visibly blowing waste are a few of the nuisance conditions that can occur at solid waste facilities. Effectively managing incoming waste, understanding how wastes break down in impoundments, and accounting for compatibility issues in advance can reduce odor and other nuisance issues.

The facility's Operating Plan must include an Odor Management Plan that details how odor and other nuisance conditions will be prevented, and identifies contingency measures to implement if odor or other nuisance conditions arise. Nuisance control requirements for Tier III facilities are contained in IDAPA 58.01.06.013.03.i.

5.9 Sludge Management Plan

A facility's Operating Plan should address sludge generation at the NSWI, sludge removal process and frequency, liner inspections after sludge removal, sludge management after removal, and sludge disposal location. In the facility's Operating Plan, a Sludge Management Plan should address the potential for metals and other waste constituents to concentrate in an impoundment and, specifically, in impoundment sediments and sludge. As waste constituents concentrate, they may reach or surpass hazardous waste thresholds, and a NSWI may become a hazardous waste generator. The frequency of sludge removal may affect your generator status (Very Small, Small, or Large) if your sludge tests as hazardous. Frequency may also affect declining water balance calculations. IDAPA 58.01.16.650 requirements may apply to the sludge generated at NSWIs, and facility operations should address these requirements.

5.10 Bird Hazards to Aircraft

All NSWIs located within 10,000 feet of any airport runway used by turbojet aircraft or 5,000 feet of any airport used by piston-type aircraft must ensure managed waste does not attract birds and does not increase the likelihood of bird/aircraft collisions. In 2013, 10 bird/aircraft collisions were reported in Idaho; half of these collisions resulted in \$50,000 or greater damage to the aircraft. Facility owners/operators should continue to evaluate waste types accepted at their facility to ensure birds do not become a hazard to aircraft. Requirements for preventing bird hazards to aircraft for Tier III solid waste facilities are contained in IDAPA 58.01.06.013.03.j.

5.11 Stormwater Run-on and Run-off Control

A Stormwater Management Plan is submitted during design review and should include operational measures to prevent stormwater and snowmelt from running into facility impoundments. Stormwater run-on and run-off controls apply to sludge management areas as well as impoundments. Stormwater and snowmelt that has contacted waste must be managed as waste. Requirements for Tier III stormwater run-on and run-off controls are contained in IDAPA 58.01.06.013.03.1.

Stormwater run-on and run-off control should include stormwater best management practices (BMPs), stormwater control system maintenance, and monitoring of the stormwater control system to ensure the system is functioning as designed. Discussion on stormwater control system BMPs, maintenance, and monitoring should be included in the facility's Operating Plan.

When stormwater control design change is anticipated, updated design plans shall be submitted to DEQ for review and approval before implementing design changes. Updated facility maps shall also be included with the Operating Plan and submitted to the local public health district for review and approval. The References and Resources section provides a web link to the BMPs.

5.12 Compatibility—Comingling, Mixing, and Consolidating Wastes

NSWI owners/operators are encouraged to keep waste types segregated whenever possible. When waste types are proposed to be mixed with one another in a single impoundment, a qualified professional should review the compatibility of the wastes before the wastes are mixed. At a minimum, the review should consider the effects on waste treatment, generation of odors, creation of chemical reactions, and effect on liner integrity. If a facility plans to mix wastes as a standard practice, a waste compatibility analysis addressing the proposed management practice should be provided as part of facility siting and design review.

5.13 Temporary Storage of Waste

Temporary storage of any liquid or semi-liquid waste in a manner not approved in the design of the facility or in the facility's Operating Plan requires prior approval from the local public health district. Temporary storage will only be approved for emergency short-term use. Unless it is the result of a declared emergency, lack of facility capacity is not considered an emergency.

5.14 Employee Training

While not included in the Solid Waste Rules, employee training is an integral part of every facility's successful operation. Educate staff on the facility's Operating Plan, policies, regulations, and guidance pertaining to the waste types accepted and managed, and on potential environmental impacts and liability issues resulting from improper waste management. Develop and implement a comprehensive training program to help staff identify prohibited waste types, scrutinize paperwork, and enforce site restrictions. Facility employees should also receive health and safety training as it pertains to their jobs and activities around the facility.

A copy of any training, whether on or off site, should be retained in the employee's file to demonstrate the employee's competency and the frequency of training. Regular, periodic employee training will not only result in a safe, well-run facility but may also reduce insurance costs and lost work time from injuries and accidents.

DEQ strongly encourages NSWI owners/operators to have a licensed wastewater operator on staff. Managing and treating pumpable waste can be more complex than managing and treating municipal wastewater, especially if multiple waste types are being comingled. If a facility repeatedly exhibits operational difficulties resulting in nuisance conditions or other noncompliance with its regulatory approvals, DEQ may require a facility to engage a licensed wastewater professional.

5.15 Worker Safety

While not included in the Solid Waste Rules, worker safety training is highly recommended. DEQ may consider certain types of training, such as identifying hazardous waste, to be crucial part of operations that affects design considerations. NSWI workers face many safety issues during their workday, including exposure to different wastes, operation of heavy equipment, and in some cases drowning. Facility management should provide the safest working conditions possible. Not every hazard will be mitigated, but training staff on the dangers associated with their job, providing clear traffic routes to and from impoundments, and providing the necessary personal protective equipment to on-site workers will reduce accidents at the site and decrease insurance costs.

5.16 Required Documentation

All Tier III solid waste facility owners/operators are required to maintain certain documents on site. All approved plans such as the facility's Operating Plan, Ground Water Monitoring Plan, Air Emissions Monitoring Plan, and Closure/Post-closure Plan must be retained on site. Other documentation such as daily logs demonstrating volumes and types of waste, employee training records, random load inspection forms, rejected load logs, and other similar documents should also be maintained on site as an employee resource and as evidence of compliance with the Solid Waste Rules.

6 Closure of a Facility

All Tier III solid waste facility owners/operators are required to submit a Closure Plan for approval and, at closure, comply with the approved Closure Plan as well as the closure requirements in the Solid Waste Rules. The time frames for Closure Plan submission are found in IDAPA 58.01.06.013.08. As a general rule, an approvable NSWI Closure Plan should follow industry standards for closing an industrial impoundment, including removing all sludge to an appropriate facility, removing any synthetic liners, and adequate sampling site-wide to identify and remove any contaminated soil.

References and Resources

The following references and resources will be updated periodically. Contact DEQ's Solid Waste Program Manager if the links are broken or out-of-date. This list was updated in January 2020.

Code of Federal Regulations. 2020. "Criteria for Classification of Solid Waste Disposal Facilities and Practices." 40 CFR 257. https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr257_main_02.tpl.

Code of Federal Regulations. 2020. "Criteria for Municipal Solid Waste Landfills." 40 CFR 258. https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr258_main_02.tpl.

Code of Federal Regulations. 2020. "Guidelines Establishing Test Procedures for the Analysis of Pollutants." 40 CFR 136. https://www.ecfr.gov/cgi-bin/text-idx?tpl=/ecfrbrowse/Title40/40cfr136_main_02.tpl.

Federal Emergency Management Agency. 2020. "FEMA Flood Map Service Center." <https://msc.fema.gov/portal/home>.

Great Lakes-Upper Mississippi River, Board of State and Provincial Public Health and Environmental Managers. 2014. *Recommended Standards for Wastewater Facilities*. (Ten State Standards). <https://www.health.state.mn.us/communities/environment/water/docs/tenstates/wstewtrstds2014secured.pdf>.

Idaho Code. 2020. "Hazardous Waste Management, Unauthorized Treatment, Storage, Release, Use, or Disposal of Hazardous Waste Prohibited." Idaho Code §39-4408. <https://legislature.idaho.gov/statutesrules/idstat/title39/t39ch44/sect39-4408/>.

Idaho Code. 2020. "Hazardous Waste Management, Violations Constituting Misdemeanors." Idaho Code §39-4415. <https://legislature.idaho.gov/statutesrules/idstat/title39/t39ch44/sect39-4415/>.

Idaho Code. 2020. "Idaho Solid Waste Facilities Act." Idaho Code §39-74. <https://legislature.idaho.gov/wp-content/uploads/statutesrules/idstat/Title39/T39CH74.pdf>.

Idaho Code. 2020. "Solid Waste Disposal Sites, Operation and Maintenance." Idaho Code §31-4403. <https://legislature.idaho.gov/statutesrules/idstat/title31/t31ch44/sect31-4403/>.

Idaho Department of Environmental Quality and Idaho Public Health Districts. 2013. "Memorandum of Understanding: The Department of Environmental Quality and the Public Health Districts." <http://www.deq.idaho.gov/media/60177724/mou-deq-phds.pdf>.

Idaho Department of Environmental Quality. 2005. *Catalog of Stormwater Best Management Practices for Idaho Cities and Counties*. Boise, ID: DEQ. <https://www.deq.idaho.gov/water-quality/wastewater/stormwater/>.

Idaho Department of Environmental Quality. 2020. “FAQs: Management of Test Fluid from Underground Storage Tank Equipment.”

<https://www.deq.idaho.gov/media/60180433/faqs-management-test-fluid-ust-equipment.pdf>.

Idaho Department of Environmental Quality. 2020. “Ground Water in Idaho.”

www.deq.idaho.gov/water-quality/ground-water.

Idaho Department of Environmental Quality. 2020. “Hazardous Waste in Idaho.”

<https://www.deq.idaho.gov/waste-mgmt-remediation/hazardous-waste/>.

Idaho Department of Environmental Quality. 2020. “Hazardous Waste Determinations.”

<http://www.deq.idaho.gov/waste-mgmt-remediation/hazardous-waste/generator-status/>.

Idaho Department of Environmental Quality. 2020. “Managing Sump Waste.”

<http://www.deq.idaho.gov/waste-mgmt-remediation/hazardous-waste/sump-waste/>.

Idaho Department of Environmental Quality. 2020. “Septic Tank Pumping and Septage and Septic System Disposal.” <https://www.deq.idaho.gov/water-quality/wastewater/septic-systems/septic-tank-pumping-and-septage-disposal/>.

Idaho Department of Environmental Quality. 2020. “Solid Waste in Idaho.”

<http://www.deq.idaho.gov/waste-mgmt-remediation/solid-waste/>.

Idaho Department of Environmental Quality. 2020. “Stormwater in Idaho.”

www.deq.idaho.gov/water-quality/wastewater/stormwater.

Idaho Department of Environmental Quality. 2015. *Pile Sampling White Paper*.

Idaho Department of Fish and Game. 2020. “Idaho Species.” <https://idfg.idaho.gov/species/>.

Idaho Governor’s Office of Species Conservation. 2020. “Endangered Species Act.”

<https://species.idaho.gov/>.

IDAPA. 2020. “Ground Water Quality Rule.” Idaho Administrative Code. IDAPA 58.01.11.

<https://adminrules.idaho.gov/rules/current/58/580111.pdf>.

IDAPA. 2020. “Individual/Subsurface Sewage Disposal Rules.” Idaho Administrative Code.

IDAPA 58.01.03. <https://adminrules.idaho.gov/rules/current/58/580103.pdf>.

IDAPA. 2020. “Rules Governing the Cleaning of Septic Tanks.” IDAPA 58.01.15.

<https://adminrules.idaho.gov/rules/current/58/580115.pdf>.

IDAPA. 2020. “Rules Regulating the Disposal of Radioactive Materials Not Regulated Under the Atomic Energy Act of 1954, As Amended.” (TENORM Rules). Idaho Administrative Code. IDAPA 58.01.10. <https://adminrules.idaho.gov/rules/current/58/580110.pdf>.

IDAPA. 2020. “Solid Waste Management Rules.” (Solid Waste Rules). Idaho Administrative Code. IDAPA 58.01.06. <https://adminrules.idaho.gov/rules/current/58/580106.pdf>

- IDAPA. 2020. “Wastewater Rules.” Idaho Administrative Code. IDAPA 58.01.16.
<https://adminrules.idaho.gov/rules/current/58/580116.pdf>.
- United States Army Corps of Engineers. 2020. “Wetlands.” Walla Walla District.
<https://www.nww.usace.army.mil/Business-With-Us/Regulatory-Division/Wetlands/>.
- United States Congress. 1965. Solid Waste Disposal Act of 1965, 42 USCA 82 §§6901 to 6992K.
<https://uscode.house.gov/view.xhtml?path=/prelim@title42/chapter82&edition=prelim>.
- United States Department of Agriculture. 2020. “Natural Resources Conservation Service—Idaho.” <https://www.nrcs.usda.gov/wps/portal/nrcs/site/id/home/>.
- United States Environmental Protection Agency. 2004. *EPA Method 9095B Paint Filter Liquids Test*. Rev. 2. https://www.epa.gov/sites/production/files/2015-12/documents/9095b_0.pdf.
- United States Environmental Protection Agency. 2011. *Principals of Design and Operation of Wastewater Treatment Pond Systems for Plant Operators, Engineers, and Managers*. Cincinnati, OH: Land Remediation and Pollution Control Division.
<https://www.epa.gov/sites/production/files/2014-09/documents/lagoon-pond-treatment-2011.pdf>.
- United States Environmental Protection Agency. 2016. *Guide for Industrial Waste Management*. Washington, DC: EPA. <https://www.epa.gov/sites/production/files/2016-03/documents/industrial-waste-guide.pdf>.
- United States Environmental Protection Agency. 2020. “Industrial Waste Management Evaluation Model Version 3.1.” <https://www.epa.gov/smm/industrial-waste-management-evaluation-model-version-31>.
- United States Environmental Protection Agency. 2020. “NPDES Storm Water Program.” <https://www.epa.gov/npdes/npdes-stormwater-program>.
- United States Environmental Protection Agency. 2020. “Per- and Polyfluoroalkyl Substances (PFAS).” <https://www.epa.gov/pfas>.
- United States Fish and Wildlife Service. 2020. “Endangered Species Act.” Idaho Species Status. <https://www.fws.gov/idaho/promo.cfm?id=177175815>.
- United States Fish and Wildlife Service. 2020. “Wetlands Mapper.” <https://www.fws.gov/wetlands/data/mapper.html>.

Glossary

The following definitions from various regulations will assist in understanding discussions in this guidance. When state statute or the Solid Waste Rules provide a definition, the state definition is provided below. If there is no state definition, the federal definition is provided.

Acceptable Knowledge: EPA and DEQ regulations allow a hazardous waste determination to be made through use of *acceptable knowledge* in addition to or in lieu of laboratory testing.

Acceptable knowledge must be accurate and can include knowledge of the processes that created the waste, the chemical constituents of the waste, and whether or not listed hazardous wastes are present. It does not include information that does not pertain directly to the waste at the time of disposal, such as testing from another facility. Acceptable knowledge is commonly used to narrow the number of tests required to determine if waste is hazardous. However, it may also be used to reduce testing frequency by facilities that can demonstrate the waste is produced from a closed, controlled process that does not change.

Domestic Septage: Synonymous with the term *septage*.

Hazardous Waste: A waste or combination of wastes of a solid, liquid, semisolid, or contained gaseous form which, because of its quantity, concentration of characteristics (physical, chemical, or biological) may

- Cause or significantly contribute to an increase in deaths or an increase in serious, irreversible, or incapacitating reversible illness; or
- Pose a substantial threat to human health or the environment if improperly treated, stored, disposed of, or managed. Such wastes include, but are not limited to, materials which are toxic, corrosive, ignitable, or reactive, or materials which may have mutagenic, teratogenic, or carcinogenic properties but do not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigations return flows or industrial discharges which are point sources subject to national pollution discharge elimination system permits under the federal water pollution control act, as amended, 33 U.S.C., Section 1251 et seq., or source, special nuclear, or byproduct material as defined by the atomic energy act of 1954, as amended, 42 U.S.C., Section 2011 et seq. (Idaho Code §39-4403).

Impoundment: Any lined or unlined area of a facility where pumpable waste or sludge that does not pass the paint filter test is managed outside of a closed container, including any area where solidification occurs. The guidance uses the term *impoundment* to distinguish these facilities, regulated by DEQ's Solid Waste Program, from *wastewater lagoons* regulated by DEQ's Wastewater Program. EPA defines surface impoundment in the Coal Combustion Residual (CCR) Rules as a natural topographic depression, man-made excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR (40 CFR 257.2).

Industrial Solid Waste: Solid waste generated by manufacturing or industrial processes that is not a hazardous waste regulated under subtitle C of RCRA. Such wastes may include, but are not limited to, waste resulting from the following manufacturing processes: electric power generation; fertilizer and agricultural chemicals; food and related products and byproducts;

inorganic chemicals; iron and steel manufacturing; leather and leather products; nonferrous metals manufacturing/foundries; organic chemicals; plastics and resins manufacturing; pulp and paper industry; rubber and miscellaneous plastic products; stone, glass, clay, and concrete products; textile manufacturing; transportation equipment; and water treatment. This term does not include mining waste or oil and gas waste (40 CFR 257.2 and 40 CFR 258.2).

Industrial Wastewater: Any waste, together with such water as is present, that is the by-product of industrial processes including, but not limited to, food processing or food washing wastewater. (IDAPA 58.01.16.010.30)

Land Application: A process or activity involving application of wastewater, surface water, or semi-liquid material to the land surface for the purpose of disposal, pollutant removal, or ground water recharge (IDAPA 58.01.16.010.31).

Lateral Expansion: A horizontal expansion of the waste boundaries of an existing MSWLF unit (40 CFR 258.2).

Leachate: A liquid that has passed through or emerged from waste and contains soluble, suspended, or miscible materials removed from such waste. Leachate is formed when precipitation filters through wastes placed in a landfill. When this liquid comes in contact with buried wastes, it leaches, or draws out, chemicals or constituents from those wastes (IDAPA 58.01.06, 40 CFR 257.2, 40 CFR 258.2, and Idaho Code §39-7403).

Liquid Waste: Liquid wastes are any waste material that is determined to contain *free liquids* as defined by Method 9095B (Paint Filter Liquids Test), included in Test Methods for Evaluating Solid Waste, Physical/Chemical Methods which is incorporated by reference (EPA Publication SW-846).

Municipal Wastewater: Unless otherwise specified, sewage and associated solids, whether treated or untreated, together with such water that is present. Also called domestic wastewater. Industrial wastewater may also be present but is not considered part of the definition (IDAPA 58.01.16.010.39).

Nonmunicipal Solid Waste: A solid waste that is not mixed with household waste and not excluded by IDAPA 58.01.06.001.03. Examples of nonmunicipal solid waste may include construction/demolition, industrial, and inert wastes (IDAPA 58.01.06.05.25).

NSWI: An impoundment facility regulated under the Solid Waste Rules as a *Nonhazardous Solid Waste Impoundment* (NSWI). A NSWI is an impoundment facility receiving pumpable waste where: (1) the waste does not pass the paint filter test prior to placement in an impoundment, and (2) operations are not otherwise regulated under a discharge or land application permit. NSWIs may be stand-alone, or may be co-located at an approved landfill or other permitted solid waste facility. Facilities engaged in food processing or other manufacturing or industrial activities that manage their liquid waste streams on site are not managing pumpable wastes as that term is defined, and are generally not regulated as NSWIs. These facilities are often regulated under a discharge permit or wastewater reuse permit (i.e., land application permit) and therefore excluded from regulation by DEQ's Solid Waste Program.

Open Dump: A facility for the disposal of solid waste that does not comply with this part. (40 CFR 257.2)

Operating Plan: The term *operating plan* is used in the Solid Waste Rules. Some facilities use other synonymous terms such as *operations plan* or *plan of operations*. However, the *operating record* is not the same. An operating record refers to the continuous documentation of facility activities.

Operator: The person responsible for the overall operation of all or part of a site or facility (IDAPA 58.01.06.05.28).

Owner: The person who owns land or a portion of the land on which a site or facility is located (IDAPA 58.01.06.05.29).

PFAS: Per- and polyfluoroalkyl substances (PFAS) are a group of man-made chemicals that includes PFOA, PFOS, GenX, and many other chemicals. PFAS have been manufactured and used in a variety of industries around the globe, including the United States since the 1940s. PFOA and PFOS have been the most extensively produced and studied of these chemicals. Both chemicals are very persistent in the environment and in the human body—meaning they do not break down and can accumulate over time. There is evidence that exposure to PFAS can lead to adverse human health effects. EPA and states are investigating sources of PFAS ground water impacts including landfills. It is recommended that owners/operators consult with a qualified professional before determining to accept waste containing PFAS and to establish protective parameters in their site approval application, design approval application, and Operating Plan. NSWI facilities should also keep informed on emerging PFAS information. The disposal facility owners/operators bear the costs associated with ground water contamination and remediation.

Plans and Specifications: A term used in the Wastewater Rules to refer to the materials submitted to DEQ under an engineer's stamp that are intended to satisfy applicable facility and design standards. For a NSWI facility *Plans and Specifications* should be submitted as part of the facility design approval application.

Preliminary Engineering Report: The preliminary engineering report for the municipal wastewater treatment or disposal facility is the report that addresses specific portions of the systems as they are being contemplated for design. These reports address specific purpose and scope, design requirements, alternative solutions, costs, operation and maintenance requirements, and other requirements as described in Section 411 of the Wastewater Rules. Preliminary engineering reports are generally project specific as opposed to an overall system-wide plan, such as a facility plan (IDAPA 58.01.16.010.57).

Processing Facility: A facility that uses biological or chemical decomposition to prepare solid waste for reuse, excluding waste handling at transfer stations or recycling centers (IDAPA 58.01.06.05.32).

Pumpable Waste: Wastes, including nondomestic septage, sludge, wastewater and nonmunicipal solid wastes, which are pumped from a holding area or container into a watertight tank truck or equivalent and transported for processing or disposal (IDAPA 58.01.06.05.34).

Qualified Professional: Qualified professional means a licensed professional geologist or licensed professional engineer, as appropriate, holding current professional registration in good standing and in compliance with applicable provisions in Chapter 12, Title 54 Idaho Code (IDAPA 58.01.06.005.35).

Reuse: The use of reclaimed wastewater for beneficial uses including, but not limited to, land treatment, irrigation, ground water recharge using surface spreading, seepage ponds, or other unlined surface water features (IDAPA 58.01.16.010.71).

Septage: Under the Solid Waste Rules, septage is defined as a semisolid consisting of settled sewage solids combined with varying amounts of water and dissolved materials generated from a septic tank system (IDAPA 58.01.06.005.41). The Wastewater Rules state septage is a general term for the contents removed from septic tanks, portable vault toilets, privy vaults, wastewater holding tanks, very small wastewater treatment plants, or semi-public facilities (i.e., schools, motels, mobile home parks, campgrounds, and small commercial endeavors) receiving wastewater from domestic sources. Nondomestic (industrial) wastes are not included in this definition. This does not include drinking water treatment residuals that may be held in a holding tank (IDAPA 58.01.16.010.75).

Septage Transfer Station: A place where septage from more than one hauler is accumulated for collection and subsequent removal without processing to a treatment facility (IDAPA 58.01.16.010.76).

Site-Specific Classification: A request by an applicant for approval of a nonmunicipal solid waste facility at a lower tiered classification (IDAPA 58.01.16.009.06).

Sludge: The semi-liquid mass produced and removed by the wastewater treatment process (IDAPA 58.01.16.010.79).

Solid Waste: Code 40 CFR 257.2 defines solid waste as “any garbage, or refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semi-solid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved materials in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges that are point sources subject to permit under 33 U.S.C. 1342, or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923).”

Sump: A general reference to a device described as a sump, pit, trench, trap, or similar device designed to collect debris and dirt before entering the sanitary sewer system or being otherwise discharged. DEQ collectively refers to these devices as *sumps*. The sand, grit, dirt, liquids, and sludge removed from these devices are solid waste and generally referred to as *sump waste*. Examples include equipment wash down collection pits, car wash sumps, and parking lot/stormwater sediment traps.

Technologically Enhanced Naturally Occurring Radioactive Material (TENORM): Any naturally occurring radioactive materials not subject to regulation under the Atomic Energy Act whose radionuclide concentrations or potential for human exposure have been increased above levels encountered in the natural state by human activities. TENORM does not include source,

byproduct or special nuclear material licensed by the US Nuclear Regulatory Commission under the Atomic Energy Act of 1954 (IDAPA 58.01.10.010.14).

Treatment: A process or activity conducted for the purpose of removing pollutants from wastewater (IDAPA 58.01.16.010.85).

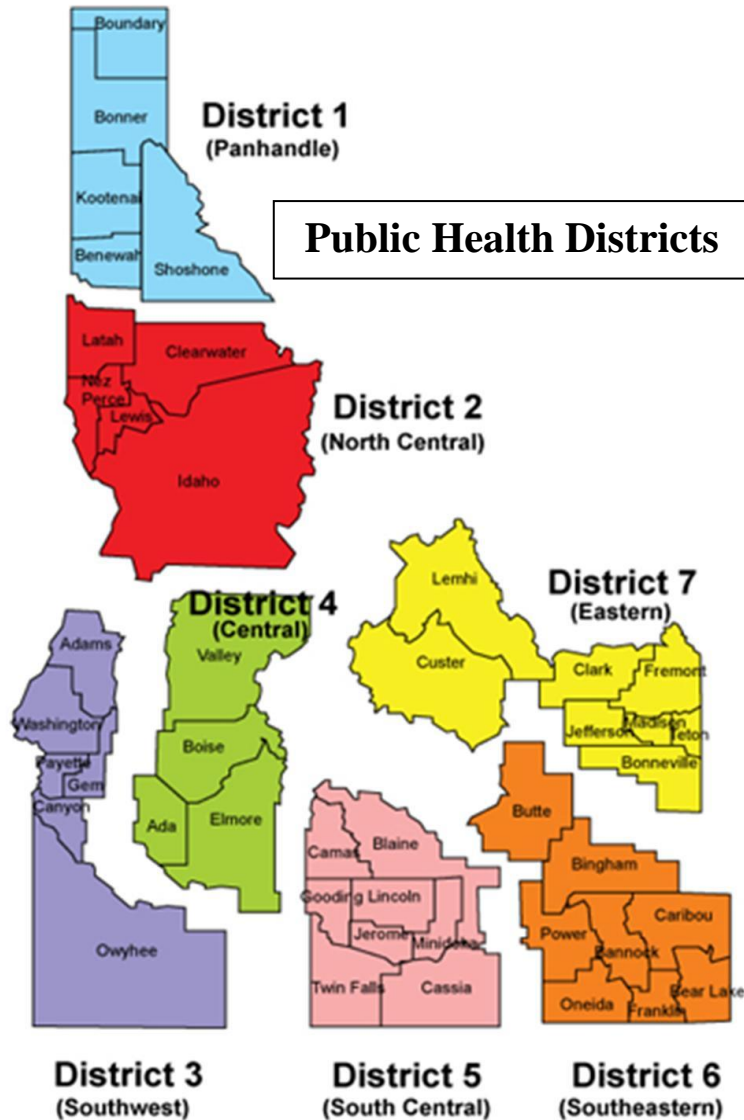
Very Small Quantity Generator (VSQG): Formally conditionally exempt small quantity generators (CESQG). A facility that generates 100 kilograms (220 pounds) or less per month of hazardous waste, or 1 kilogram (2.2 pounds) or less per month of acutely hazardous waste (40 CFR 261.5).

Waste Management Area: Any area where wastes that pass the paint filter test, such a bulked or solidified waste, are managed.

Wastewater: Any combination of liquid or water and pollutants from activities and processes occurring in dwellings, commercial buildings, industrial plants, institutions and other establishments, together with any ground water, surface water, and stormwater that may be present; liquid or water that is chemically, biologically, physically or rationally identifiable as containing blackwater, gray water or commercial or industrial pollutants; and sewage (IDAPA 58.01.16.010.89).

Wastewater Lagoon: Man-made impoundments for the purpose of storing or treating wastewater (IDAPA 58.01.16.010.91).

Appendix A. Jurisdictional Maps of Health Districts, DEQ Regions, and Counties



Appendix B. NSWI Facility Example Pumpable Waste Profile Form

The attached form is an example of how facilities may address one aspect of pumpable waste acceptance. It is not intended to be inclusive of all necessary requirements, provide any legal advice or protections, or ensure regulatory compliance. Every facility must work with its own consultants and attorneys to develop a waste acceptance process to be included in the facility's Operating Plan and submitted to DEQ and the public health districts for review and approval.

Waste Profile ID: _____

Approval Date: _____

Expiration Date: _____

PUMPABLE WASTE PROFILE

In order for FACILITY to decide whether we can lawfully and safely accept your waste delivery, we must obtain the following information about your waste. Unless otherwise indicated on this form, this profile expires one year after approval. The form should be filled out completely by someone knowledgeable about the waste and the hazardous waste rules. The Generator makes a hazardous waste determination and is responsible for that waste from cradle to grave. All related analysis must be included with this form and if the process creating the waste changes or future analysis differs from what was submitted, a new analysis must be sent to FACILITY immediately. All information on this form must be typed or printed in ink – mark-outs are not allowed. See Instructions for more information.

I. Generator Information (NOT Consultant or Contractor)

Generator Name: _____

Address: _____

Contact: _____ Phone: _____ Fax: _____ Email: _____

Location of Waste Generation: _____

II. Has Waste Generator selected a Waste Transporter? [] YES [] NO

If yes: Name of Transporter _____

Address of Transporter _____

Contact for Transporter _____

Transporter Contact Information: telephone _____ email: _____

III. Waste Information

Common Name of Waste: _____

Detailed Description of Process Generating Waste. Attach schematic of unit process and/or flow sheet, if available: _____

Is This a Hazardous Waste as Defined by Federal, State or Local Laws or Regulations?

[] Yes [] No

VI. Physical Characteristics of Waste

Color: _____

Odor: [] None [] Mild [] Strong Describe

Physical State: [] Semi-Solid (sludge) [] Liquid [] Other _____

Percent Solids (if known): _____ % pH _____

Estimate fractional content of all materials present in the waste:

_____ % water _____ % soil _____ % organic matter _____ % trash
 _____ % concrete _____ % metal _____ % plastics
 _____ % other and describe _____

Are the waste characteristic provided above from lab analysis and inspection of the actual waste?
 (Mark "No" if you relied on documented "typical" content or similar) ☐ YES ☐ NO

Has the waste come into contact with domestic septage or sewage wastes? ☐ YES ☐ NO
 (Any potential for human pathogens)

Has the waste come into contact with fuel/petroleum products, or chemicals? ☐ YES ☐ NO

Describe: _____

Waste will be delivered to the site in: ☐ Bulk ☐ Drum ☐ Other _____

Anticipated Volume: ☐ Tons ☐ Yards ☐ Drums ☐ Gallons ☐ Other _____

Frequency: ☐ One-time ☐ Weekly ☐ Monthly ☐ Other _____

IV. Consultant or Contractor Information

Consultant/Contractor Name: _____

Address: _____

Contact Person: _____ Phone: _____ Fax: _____

Email: _____

V. Laboratory Information and/or "Process Knowledge"

Every shipment of pumpable waste must be accompanied by a waste determination. A waste determination is made either through analytical testing of the waste in a laboratory, knowledge of the process that created the waste, or a combination of both. FACILITY uses this information to ensure no hazardous waste is received and to properly categorize the waste for compatibility purposes.

A. Laboratory Analysis

Laboratory Name: _____

Contact: _____ Phone: _____ Fax: _____

Email: _____

How did you determine what constituents were to be included in the laboratory analysis?

Attach results and chain of custody documentation for all analyses performed on the subject waste within the previous 12 months. For minimum parameters to be reported see attached document "Waste Analysis Required"

And/Or

B. Process Knowledge. Reliance on process knowledge alone is most appropriate when there is a closed process and all process inputs are known to the generator, and the process is static and unchanging. To rely on process knowledge please attached document "Pumpable Waste – Process Knowledge Worksheet."

VI. Random Sampling

FACILITY performs random sampling and analysis for hazardous waste characteristics and constituents of wastes provisionally accepted at the site. If your waste is selected for random sampling, a sample will be collected at the time of receipt of the waste, the waste will be solidified with a solidification reagent, and the solidified waste will be temporarily stored at the site. If the results of random sampling and analysis indicate that the liquid was hazardous, the Generator shall be financially and legally responsible for retrieval, transport, and disposal of the pumpable waste/solidification reagent mixture at no cost to FACILITY. By execution of this document, the Generator agrees to indemnify FACILITY from, and agrees to defend FACILITY against, all liabilities associated with the handling of Generator's hazardous waste. In addition the Generator shall be responsible for all cleanup costs associated with contamination of FACILITY'S solidification facility as a result of delivery of hazardous waste to the facility.

VII. Certification

WHO IS RESPONSIBLE FOR PAYMENT FOR PAYMENT FOR SERVICES? _____

I hereby certify that I am the Generator, or I am authorized by the Generator to provide the information submitted in this form and any attached documents, including any Pumpable Waste Process Knowledge Worksheet, and to enter into this Agreement on the Generator's behalf. I have made a complete and thorough investigation of all matters relevant to completion of this form. This investigation included laboratory analysis, where applicable, on a representative sample of the waste. All required information concerning the waste, including the results of all laboratory analyses has been provided in this and the attached documents. I further hereby certify that such information is complete and accurate and that all known or suspected hazardous constituents/characteristics or safety hazards associated with the waste have been disclosed herein. I understand that the waste may be subject to random sampling and conditions described in Section VI of this form, that any waste that is non-conforming will be returned to me, and that FACILITY will not be responsible for expenses related to transportation, storage and handling of the non-conforming waste.

Name: _____
(Title) (Signature) (Date)

VIII. Waste Acceptance

The waste, as represented by information contained in this document, is provisionally accepted for disposal at FACILITY per Section VII. Waste Profile Identification Code: _____

Conditions of Acceptance (If Applicable): ☐ Require Waste Analysis every Load

(Signature of Authorized FACILITY Representative) (Date)

X. Waste Rejection

The waste, as represented by information contained in this document, is not accepted for disposal at FACILITY for the following reasons: _____

(Signature of Authorized FACILITY Representative) (Date)

PUMPABLE WASTE PROCESS KNOWLEDGE WORKSHEET

DATE: _____

WASTE GENERATOR (Business Name): _____

Pumpable Waste SOURCES and CHARACTERISTICS: Please circle appropriate responses below

Restaurant Grease	YES	NO
Car and Truck Washing. (If yes, is it hand-wand or drive-through?)		
Is the facility manned during operating hours and secured when closed?	YES	NO
Is there signage in the area warning that waste dumping is not accepted?	YES	NO
Vehicle Maintenance		
Passenger/on-road Vehicles	YES	NO
Specialty Vehicles (industrial sector: _____)	YES	NO
Parking Lot Runoff		
Passenger/on-road Lot	YES	NO
Specialty Vehicle Lot (industrial sector: _____)	YES	NO
Industrial Process	YES	NO
Irrigation Wet Well or Sump	YES	NO
Domestic Septage	YES	NO
Production Water from Oil & Gas Operations	YES	NO
Fuel Contaminated Pumpable Waste	YES	NO
Groundwater Remediation Pumpable Waste	YES	NO
Leachate from a Waste Disposal Site	YES	NO
Concrete Hydro-demo or Hydro-excavation Slurry	YES	NO
Wastewater from Cleanups or Emergencies	YES	NO
Mixed / Unsegregated Loads or Pumper Trucks Carrying Various Waste Types (contaminated)	YES	NO
Other as Described:		
Known Chemical Additives in Sump (Provide description and MSDS)	YES	NO
Does the sump drain to a city sewer? See Note 1	YES	NO
Does the sump drain to a storm sewer? See Note 1	YES	NO
Does the sump drain to a vegetative area or containment basin?	YES	NO
Has the sump been previously tested? (See Note 2, attach results)	YES	NO
Other:	YES	NO

NOTE #1: Provide name and contact for discharge to: _____

NOTE #2: Sump testing should reflect solid wastes accumulated in the sump and not the wastewater using toxic characteristic leaching procedures (TCLP).

INSTRUCTIONS for Completing Pumpable Waste Profile

- Item I: Provide Name, Address, and Contact Information for Pumpable Waste Generator, and location where the waste is generated.
- Item II: Provide Name, Address, and Contact Information for Waste Transporter, if known.
- Item III: Provide the common name of the waste type (e.g. "Grease Trap Waste") and the process that generates the waste. For simple processes this may be a very short description ("sump/trap that captures restaurant grease before it enters the city wastewater/sewer system"). For complex processes you will likely need to attach information and schematics, with the focus on what waste constituents are used in the process and how those might be changed or be found in the waste that is generated. The "process" may simply refer to an incident or activity: generated by truck spill cleanup, building demolition, or other activities. Finally, indicate whether the waste is "Hazardous Waste" by law. You may need to consult with an expert or refer to Federal or State guidance to answer this question. The FACILITY cannot take hazardous waste and you will be held financially liable for any hazardous waste that you deliver to the FACILITY knowingly or unknowingly. FACILITY may require a site inspection to better ascertain the unit process generating the wastes. Suspected hazardous wastes will require toxicity characteristic leaching procedure (TCLP) testing as directed by the FACILITY to confirm the wastes are not hazardous wastes.
- Item IV: Provide a physical description of wastes that may include estimated water content, viscosity, odor, pH, inorganic contents, organic contents, flash point, salts, metals, and other constituents. Describe fractional content of all wastes as estimated ranges: For example: Demolition wastes may be described as percent soil, percent concrete, percent vegetation, percent metal and percent trash that add up to 100%. Indicate whether the waste characteristics provided are "typical" or the result of laboratory analysis on the actual waste.
- Provide a response as to whether the wastes have come into contact with septage, sanitary sewer wastes, or other wastes that may be contaminated with or contain human pathogens?
- Describe any petroleum products or chemicals associated or contained in the waste. Provide material safety data sheets (MSDSs) for petroleum products and/or chemicals.
- i. If petroleum products are suspected, total petroleum hydrocarbon testing will be required. Other organic tests may be required, pending petroleum hydrocarbon released, such as benzene, ethyl benzene, toluene, and xylene (BTEX) for gas spills. FACILITY may accept petroleum hydrocarbon contaminated wastes if total petroleum hydrocarbon concentrations are less than 25,000 mg/kg.
 - ii. If caustic or acidic chemicals are used in the unit process, testing for the eight Resource Conservation and Recovery Act (RCRA) heavy metals may be required as determined by FACILITY staff. Data collected from similar sites may be considered with follow-up site specific data to confirm non-hazardous waste conditions.
- Item V: Provide Name, Address, and Contact Information for Contractor/Consultant, if known.
- Item VI: Laboratories must use EPA-approved testing methodology. For example, regulatory accepted analytical protocols for analyzing total petroleum hydrocarbons (TPH) may include : EPA Method 418.1, Diesel Range Organics (DRO) option under USEPA Method 8015B, Oregon DEQ Northwest Total Petroleum Hydrocarbon Methods for diesel and gasoline (NWTPH-DX & NWTPH-GX), EPA Method 1664 A if TPH contaminated wastewater or other regulatory approved TPH testing methods as reported in the *State*

Summary of Soil and Groundwater Cleanup Standards for Hydrocarbons published by the EPA Office of Underground Storage Tanks. FACILITY reserves the right to require other test methods or additional testing. Indicate how the list of analytes was arrived at (reference to process). Analytical results must reflect the media being disposed of.

Acceptance of waste determinations based on process knowledge are at the discretion of the FACILITY. Fill out the Pumpable Waste – Process Knowledge Worksheet for consideration.